Text-Book

on

Domestic Art

CARRIE CRANE INGALLS

A GRADUATION GOWN

Text-Book

ON

Domestic Art

WITH

Illustrations and Drafts

BY

CARRIE CRANE INGALLS

Teacher of Domestic Art in Cogswell Polytechnical College

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For the frontispiece, I must thank Miss Berta Lucas, a senior in the same college, whose photograph shows her in the gown which, as the required completion of the course, she made for her graduation.

And I am under obligations to Miss Jean Parker and my sister, Mrs. Bertha Borden, for reading and revising my manuscript and proof, and also to my advisor, William H. Gorrill, Esq., Attorney-at-Law.

The pupils who have faithfully completed the course described in these pages, and from whose work nearly all the illustrations are taken, have, of course, contributed more to the volume than I can say—very likely more than I myself realize.

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INTRODUCTION

(*Extracts from a lecture delivered before the C. T. A. Convention.*)

Since the universities and colleges have realized the importance of agricultural training for men, why is it not essential that the High School institute a course in Domestic Art that will teach the girl not only how to sew correctly, but to clothe herself in the most economical and attractive way possible?

If there is a system for teaching arithmetic, there is most certainly a system to be followed in teaching sewing; and because a definite and strict course of study has not been outlined, the sewing teacher has been obliged to work with material she could get at the minimum cost, frequently offering it as an elective because many school girls find it necessary to make their own clothes.

The art of sewing, intuitive in every girl, should be developed; if a mother can not teach her little daughter elementary sewing, why should not the State provide teachers for this important subject? Indeed, not only for little daughters, but for growing and grown-up girls, should skilled teachers be employed, in sewing, dressmaking, embroidery and millinery,—just as they are provided for foreign languages, mathematics, art, music, etc. While I would not compel nor require every girl to become an adept in the domestic arts, still she deserves the opportunity of this training if she wishes it. Let us not forget that there is just as much system, order and discipline in sewing, as those other studies which tend to educate her for the fullest duties of life.

If a city school can supply a good equipment, why should not this course be continued into the High School, as other elective subjects, for girls who would learn embroidery, millinery, tailoring, etc.

The cost of a ready-made dress is exorbitant and beyond the purse of most working girls in comparison with the same cost if home-made. But these same garments could be spoiled by the lack of knowledge of correct cutting, fitting and finishing, as well as of unsuitable and unpractical

materials. Each of these points makes up the cost of the finished gown, which the girl, in her eagerness to possess, does not comprehend.

In the art of living, we learn to obey the laws of hygiene and nature. Our first steps should concern health, food and clothing. Health depends upon food and clothing—because our food keeps the body in a healthy condition, while clothing registers the proper degree of warmth of the body. It is quite as important to know how to dress the body properly, as to feed it; for a violation of the laws of body-protection—shown in some new fads, often unsuited to the different climates where they are foolishly introduced or ignorantly followed—may impair the health of otherwise fine men and women.

So many mistakes in selection and cost of clothing are made by the majority of people, I am persuaded that girls should be taught the economic as well as the theoretic side of living. In many instances it is necessary for teachers to give practical advice in the use of cotton for silk, a clean, dark underskirt for the soiled white one, embroidery for lace, etc.

That the study of sewing lowers the standard of the High School curriculum, is the weakest of all arguments.

More true womanliness and love for home and home-duties come from the art of the needle than from any other occupation a girl may choose. To be sure, music is beautiful, languages give one power to speak fluently and to enjoy great minds; algebra and chemistry are certainly factors in education, but domestic art or good practical sewing is an absolute necessity. The sweat-shop and ill-paid wages for apprentices, seamstresses, etc., have made the work a drudgery.

Indeed, a course in sewing may be found to be more complicated than a course in mathematics—because fashion decrees a never-ending change of style of color, cut, form, material and ornamentation. It should include a study of the various materials in their raw and manufactured state, and the different plants, animals or vegetables that go to produce the fibers woven into materials and patterns. Although the fundamental materials, such as cotton, flax, woolen, silk, etc., may be simple, the combination of any two or more of these give us a numberless list of names, which are as hard to classify as some species of plant forms in a laboratory. Yet these may be analyzed by observing the weave, nap, texture, etc.

Now, why should not the girl be given the right foundation to meet the material difficulties

of her later years, since the problems of clothing like those of cooking can not be escaped, and why should not the rudiments of these be learned in the school room?

When sewing has been made an elective, we find more than one-half are eager to learn to make their own clothes. Should it not then be taught? From experience, I have found that parents are quite as pleased as the pupils when a garment, which has been drafted and well put together, or a hat, cheaply and becomingly made, is taken home for inspection and is worn by the daughter.

I have been asked by several teachers if I thought drafting was essential. I answer, "Yes," most emphatically. My reasons are first of all that the girl learns the laws of proportion in putting a garment together; to be exact; to make alterations when required; and what is very important, also, her own measurements—perhaps this may show her some physical defect which is the result of improper clothing or lack of bodily development. This can also be made a lesson in physical culture; for when I measure a girl's hips and find the right side is 2½ inches larger than the left, I could tell her how disfigured she will grow, should she continue to stand improperly.

There are many other lessons that come to the sewing teacher, while she is fitting her pupil's dress—neatness, cleanliness, proper choice of material, etc. A careful study of the needs of each pupil may bring about invaluable results. Drafting may seem complicated, yet it is surprising how readily a class will comprehend it.

Tailoring or advanced sewing, can not be made a perfect or progressive study, if drafting has not been taught. This is necessary for the complicated gowns as well as the simple, plain lines, which make the foundation for each garment. A gown may be ruined by using the warp for the woof, or a seam for a fold. There is always a right way and a wrong way, and, in the beginning, it is just as easy to learn the right way.

In teaching the art, method or accomplishment of sewing, the work must be so systematized that the pupil will realize the importance of each step and its relation to the finished article, until, thru habit, each piece of work is well done. This means close concentration and application with eyes on the needle and material.

If hand sewing only is done, a wider range of work should be adopted by the teacher, apply-

ing sheerer materials or daintier work as outlined in Part Three, yet never confounding the classification of stitches and their proper application. If schools do not furnish sewing machines, it is impossible to complete the course marked out in Part Two. In these days no work room is properly equipped for practical experience without one or several sewing machines. Moreover, I would suggest more than one variety of make, as machines are divided into two classes—the shuttle or bobbin and the automatic. Both kinds should be thoroughly understood.

The best of everything is the cheapest in the end; standard machines, needles, thread, scissors, tape measures, thimbles, etc., will stand more strain and will wear better than cheap grades.

As advanced work in drafting, embroidery and millinery has lately been introduced into the High School, it is best to take a simple, plain system which can be understood by all, leaving the many varieties of tailors' charts and systems to the professional.

In this book my object has been to start with the elementary stitches and work up to the more complicated in direct order of classification, being careful not to confuse the plain, the embroidery and the lace stitches with one another.

Embroidery is an advance over plain sewing as are lace stitches over embroidery stitches, so plain stitches must be the fundamental ones. If girls have had an elementary course in sewing it is unnecessary to take the time for sampler work, yet such a test is the only way a teacher may know the quality of a pupil's work.

Plain stitches are so few in number that one sampler may contain them all. So too with embroidery stitches, variations of the same stitch are given particular names, but the countless lace stitches are more difficult to classify, as different countries designate the same stitch by other names.

The sampler should not be used for practising stitches, but rather as an exhibition of skilled handiwork.

In drafting I have used the straight line as much as possible, as curved rulers are not always obtainable or properly used by beginners. The benefit derived from making even the simplest draft is a knowledge of proportion and accuracy of measurement.

Familiarity with different materials leads up to the study of textiles and manufactures so that the field is unlimited. This book is not pretentious in cumbersome detail of long studied

work in any one of these accomplishments, aiming rather to be a practical guide for the teacher and a valuable textbook for the pupil.

Finally, to the young woman who wishes to develop practical economy, good taste and a knowledge of how to properly clothe herself, this book is affectionately inscribed.

PART ONE

RULES FOR SEWING

Clean hands	Needles
Erect position	Thread
Aluminum thimble	Tape measure or rule

The thimble is worn on the middle finger of the right hand.

The length of thread should reach from shoulder to hand.

In threading, hold needle in right hand.

To tie a knot, take end before breaking thread, wind it over first finger of left hand, rolling it with thumb. Make knot as small as possible.

The needle should slant toward the shoulder in sewing, and the top of thimble strike the needle.

NEEDLES

1. Betweens (short, tailor) 1-12
2. Sharps (medium) 1-12
3. Milliners (long) 3-10
4. Embroidery (blunt or sharp point with long eye) 1-10
5. Darning (sharp point, long eye; larger than embroidery) 0-9.

1. Betweens are used by tailors for very fine hemming such as finishing coat collars. The Chinese use Nos. 9 and 10 for embroidery.

2. Sharps are used for all ordinary sewing and plain stitches.

3. Milliners are used for basting and millinery.

4. Embroidery or Crewel are used with silk thread, floss, etc., for embroidering and fancy work.

5. Darning are used for mending and weaving.

A needle is a small, sharp, pointed instrument, either straight or curved, and is used to carry thread thru different kinds of fabrics, paper, leather and other materials. The origin of the needle is unknown, tho its earliest usage dates back to China, where are found the smallest needles in the world. The first needle factory was built in Germany in 1730. There are over 150 varieties now manufactured for sewing alone and, in the course of manufacture, one needle passes thru 22 processes and is handled by 70 different pairs of hands. They are made of best steel wire, being cut twice the length of one needle, with the eyes in the center. The best needles

pass thru many degrees of tempering. Oil is now used for hardening in place of water which tended to make them crooked. A good needle will neither bend nor rust; it breaks. Needles are constructed differently, being curved or blunt at the point, or having round or oval eye in the center as the machine needle, or at one end as the plain sewing needle.

Most of the standard sewing needles as well as the Crewel needles are manufactured in England. Machine manufacturers usually make their own needles. Machine needles are divided into the round and flat shank sometimes with a groove on one side as in the automatic or chain stitch machine; the flat shank is most used on a lock stitch machine, differing in length according to the make of the machine but not varying in size as do hand needles. Nos. 0 to 4 are average sizes while 1 to 12 are hand needles.

The size of the needle generally corresponds to the number on the spool of cotton thread in hand sewing, as No. 7 needle for 70 cotton, while the machine sizes run one size needle for two or three numbers of thread or silk, as No. 2 needle with 60, 70 and 80 thread.

THREAD

1. Basting
2. Sewing cotton
3. Glacé cotton
4. Mercerized cotton
5. Luster cotton
6. Linen
7. Silk finish

Thread varies from Nos. 16 to 200.

1. **Basting cotton** is the inferior cotton thread used for basting and guiding. It is made from poor quality of cotton fiber.

2. **Sewing cotton** is mostly used for general hand and machine sewing in all colors and sizes.

Glacé cotton was manufactured especially for the automatic machine. It has a smoother and harder finish than any other thread except linen.

4. **Mercerized cotton** is used principally by manufacturers to sew garments, and is a substitute for silk, working into the goods, especially woolens, much better than silk, tho it is not as strong.

5. **Luster cotton** or linen is a twilled, firm and strong thread, made of either fiber.

6. **Linen thread** is made from the flax fibers and is stronger than cotton thread.

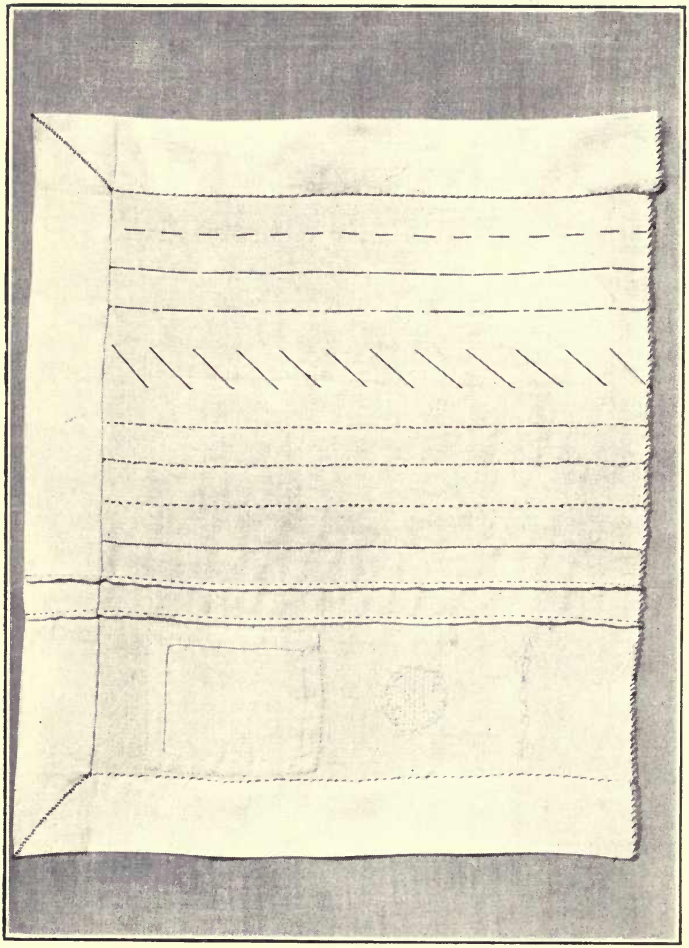
7. **Silk finish** is a strong luster thread used principally in millinery.

SAMPLER NUMBER ONE

PLAIN STITCHES

Overcast
Hemming
Blind or slip stitch
Over and over
Even baste
Long baste
Long and short baste
Tailor's baste
Running or gathering
Three running and one back stitch
Half back stitch
Whole back stitch
Darning

Tear a piece of cotton cloth (Fruit of the Loom is good) into strips 9 inches long on the warp or straight, and 12 inches on the woof or width. One yard of cloth 36 inches wide will



tear into a dozen pieces each 9x12,—three pieces on the width and four on the length.

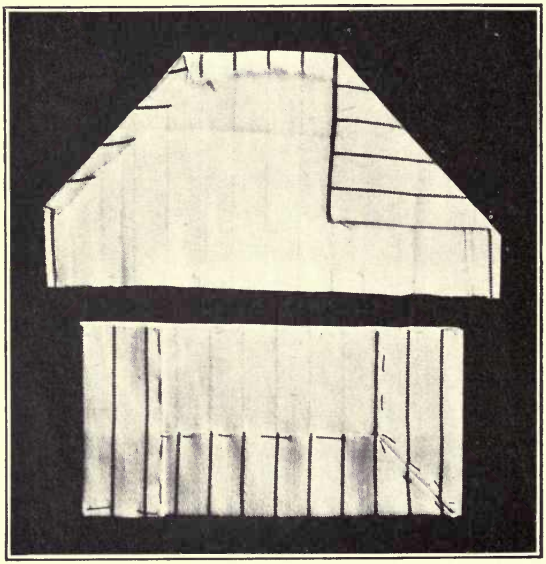
This sampler is worked in order to show all the plain stitches included in sewing. They are the fundamental ones, but variations, as the baste, running or back stitches, may be made. By using colors contrasting with the background the stitches will show to better advantage.

Commence at the right end and on right side of goods (leaving knot on wrong side). Work from left to right. Turn a 1-inch hem on the two short ends and one long side.

A **hem** is a double fold of cloth on the edge of the material and varies in width from ⅛ to 6 or more inches, the first turn being from 1/16 to ½ inch according to thickness of material or its tendency to ravel. Crease the first turn sharply and evenly by laying on a flat surface and creasing with thumb of right hand. The second turn or crease is made the desired width of hem, so it is especially important that the first crease is straight and even. For a guide, use a rule or a strip of cardboard cut out the correct width. Before basting this hem the corners should be mitered.

To **miter** is to fold the corners of material so

the sides will join on the diagonal, instead of straight—a neater way of finishing corners than the folded hems. There are two ways of miter-



ing: cutting away the goods left after folding, or turning all under, the latter leaving the corner firmer and less liable to lose its shape. Fig. 1.

After the hem has been creased on three sides

of sampler see that the corners are also sharply creased. Then unfold the first crease and make a diagonal crease at the point where the warp and woof sides come together on the corners. See Fig. 2. If turned accurately the creases will match. Refold as for hem with the diagonal piece turned in, this join making a diagonal fold. This is sewed together with a very fine, straight over and over stitch, catching only the edge of fold and not that which is tucked under. Baste lower edge of hem to the goods and baste also the mitered corners on each edge, to keep them in place. Next overcast the long raw edge.

Overcasting is an over and over, slant stitch used to protect raw edges from fraying. Start at right corner, with knot on under side, pulling needle thru on right side, deep enough only to prevent raveling. Repeat with even stitches (1/16 of an inch deep). This stitch slants from right to left and is one of the most difficult to make uniform.

To make a **hemming stitch,** start at the right side on the edge, hiding the knot under the hem, and take up one or two threads of the goods, just catching it to the edge of the fold or hem. Slant the needle toward the shoulder and hold hem at

lower edge over the first finger of the left hand, with the middle finger over the goods to hold the goods firm. The stitches should be small and even with a slanting stitch on the right and a straight stitch on the wrong side. Hem the two short sides. On the other long side which has been turned for a hem make the blind or slip stitch, so called because the thread slips thru the fold in the hem and is invisible.

The **blind or slip stitch** is started similar to the hemming stitch, catching a few threads of the goods at the edge of the fold and carrying the needle into the hem just above the edge, so the stitch can not be seen, and running or slipping it thru the hem or fold about ¼ of an inch. It shows no stitch on the right side, but resembles hemming on the wrong side, with stitches farther apart.

The **over and over stitch** is a very fine horizontal stitch used to join two turned-in edges, folds or selvages. Patchwork is an example. One-half inch below the hem at the top of sampler crease a line by folding it to right side and creasing sharply. This crease is a guide. Start all the plain stitches at the right of sampler near overcast edge on creased line, ½ inch apart.

Even baste stitch has the same length of stitch on both right and wrong sides and should be about ⅜ inch long. It is used to join two or more thicknesses of material together, preparatory to machine or fine hand sewing.

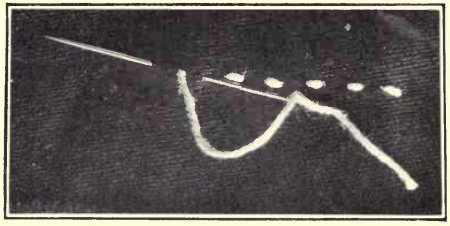
Long baste stitch has one long stitch on right side and one short stitch on wrong side. It is used as a guide stitch or for joining cloth.

Long and short baste stitch has one long stitch on right side, one short stitch on wrong side, a short stitch on right side and another short stitch on wrong side. This is used in joining long seams and is a firmer stitch than the long baste.

The **tailor's baste** has a slant thread, starting at base of goods or creased line, with another creased line ¾ inch below. It slants toward the left on the right side, making a straight stitch on wrong side. The tailor's baste is used to join a number of thicknesses of cloth, particularly padding. Strong thread and a coarse needle are needed. There are many variations of this stitch in length and slant.

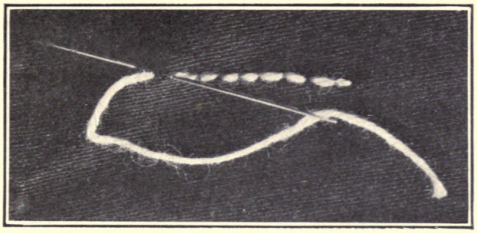
Running stitch is a firm, even stitch on both right and wrong sides. It is used for gathering or joining two or more pieces of material together. These stitches are made by movement of the wrist.

Three running stitches and one back stitch. Take three running stitches (see No. 5); go back one whole stitch in the same hole the last stitch ended, coming out twice the distance on under side of goods. Repeat. This is used for joining long seams by hand.



The **half back stitch** has one running stitch on the right side and twice the length of that stitch on wrong side. It goes back only half the distance of the first stitch on the right side, making a succession of short, even stitches on the right side with a little space between and a lap-over stitch on the wrong. It is a stronger way of joining cloth than the preceding stitch.

The **whole back stitch** is one even running stitch on right side, going back one whole stitch through the same hole, making one continuous line of stitches with no space between. This is



used in place of machine stitching and is the strongest of all the plain stitches.

Tucks—One-half inch below this last stitch, crease a line or fold of the material for a tuck which is sewed with a small, running stitch. Where the extra thicknesses fold on the hem the needle must go in and out separately or it is liable to break and the stitches will be too large. Start at the hem edge with an over and over stitch first, in order to make the tuck firm and take one stitch at a time 1/16 inch from the edge. In the same way make a second tuck ½ inch below this one. Tucks are used to shorten, or in case of shrinkage as a means of lengthening a garment, or, where very fine tucks are made, as ornamental.

Patch—Below these tucks and 1 inch to right of hem, draw a rectangle 1x1½ inches, the shorter line being the perpendicular. Cut out on these lines. Cut each corner diagonally about ⅛ or 3/16 inch. Crease the raw edges on wrong side before putting on patch.

A **patch** is a piece of cloth used to cover an open space on another piece of material, where darning or weaving can not be applied. The use of the patch is to render the torn spot strong but unnoticeable, and except for contrast or effect, is always of the same material as the torn goods. Patches are used mostly on cotton goods, while woolens are more easily darned.

The patch must first be matched to the grain of the material that is to be patched; this grain constitutes the warp, woof, bias and crossway of all textiles.

The **warp** is the length, straight or selvage of the goods—the foundation threads in the process of weaving. They run vertically.

The **woof** or **filling** is the width of the goods—the threads that are woven into the warp threads in the opposite direction. They are usually inferior in strength and quality to the warp threads.

A **crossway** cut is not a true bias cut but is

midway between the warp and bias or the woof and bias.

Cut out a rectangular patch of same material as sampler and larger than the space to be covered to allow for turning in. Lay this patch on the wrong side of sampler, matching it to the grain of the cloth and pinning it in place before basting, with the corners square and clean cut. Hem or blind stitch very fine with No. 9 needle and 90 cotton. Pull out basting thread, turn on wrong side, cut the goods evenly ¼ inch from the edge just hemmed. Fold under the raw edge ⅛ inch for hem, baste and hem as on right side.

Darning—Below the tucks, 1¼ inch to left of the overcast edge, draw or crease, then cut a **vertical** line 1½ inch long. This is a warp cut and is to be darned.

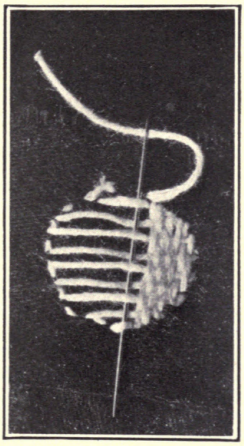
The **darning** stitch is a very fine running stitch woven in and out and back and forth on the right side. Darning is used to fill a space when a patch is not necessary. A piece of cloth may be put underneath to strengthen the darned place and woven in at the same time. These two raw edges should be brought together without pucker-

ing, misshaping or raveling, nor should they be overlapped. A woof tear makes the easiest of all darns as the stitches are woven with the warp.

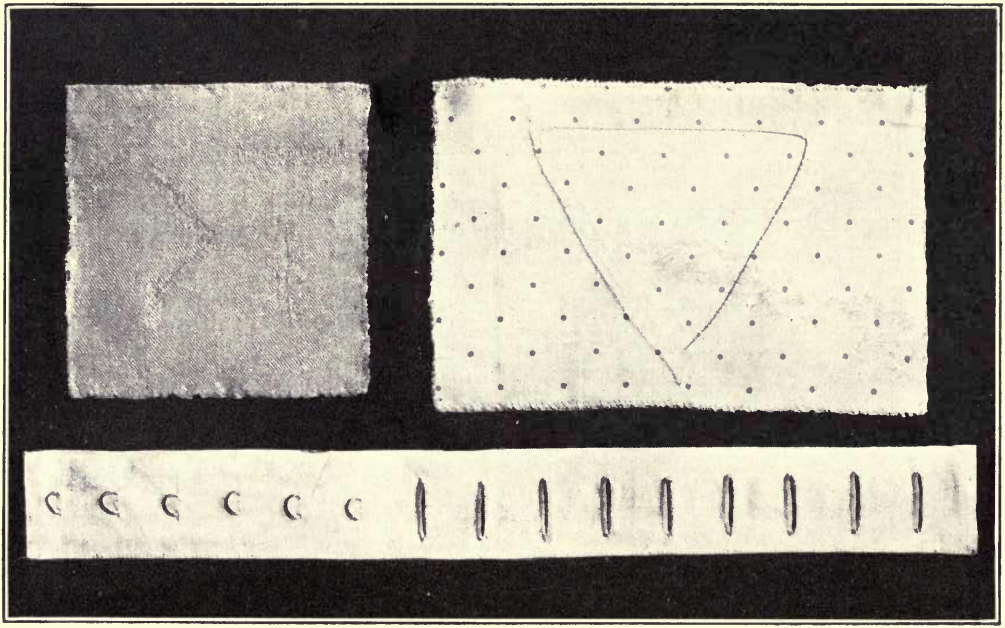
Start at the top of the cut and work down without tying a knot in the thread. Leave the raw edges on the under side and at each start make the return stitch as short as possible. Each line of stitches must be parallel. End on the wrong side with a short over and over stitch. Press the darn on the wrong side wetting it slightly, or on the right side, first laying a damp cloth over it.

Stocking Darn—In the center of the sampler, between the patch and the darn, draw then cut out a round hole the size of a small thimble. This is to be darned or woven. Use No. 20 8-ply darning cotton with a No. 6 darning needle. Split the strands, using two at a time. Commencing at the right near the top, make a running stitch around the edge of the circle, and starting at same place, make the foundation threads parallel with the warp threads of the sampler. Take a small full stitch each time leaving the raw edges on the under side never using the same hole for the return stitch but instead, taking a short horizontal stitch, thus making a space between

the vertical rows. After the hole has been covered with warp rows, start the horizontal lines at the lower right edge, taking a firm stitch, and weaving in and out, or over then under, never missing



a warp strand. In the second row weave first under and then over, alternating the stitches with those of the first row. The third row should begin and correspond with the first row, the fourth with the second, and so on. End on the wrong side with a back stitch. Keep the foundation threads flat while drawing them thru and



do not draw the goods. In weaving the filling, the surface can be held over a large baste spool or something flat, to keep from puckering. This simple form of weave is the first known example of holding fibers together and is called a **plain weave.**

When the sampler is completed press it on the wrong side and familiarize each stitch that has been worked.

In the upper hem write the name of worker and the date.

SAMPLER NUMBER TWO

THREE CORNERED PATCH ON STRIPED, FIGURED OR PLAID GOODS

Size of sampler 4 by 6 inches.

Overcast all around the edge, using No. 90 cotton with a No. 9 needle. Cut a 3-inch, equilateral triangle in center of goods. Turn under the raw edges ¼ of an inch, cutting each corner on the diagonal ¼ inch to make the edge straight. Then place a piece of the same material on under side larger than the triangular opening, and match it to the design on all sides, pinning in place before basting. Hem on right side with tiny, even stitches. Turn to the wrong side, trim off the patch evenly, making a ¼-inch hem. Hem as on opposite side. Each corner of the patch should be cut and finished alike.

Press on wrong side, and attach name and date.

SAMPLER NUMBER THREE

CASHMERE

Size 4 by 4 inches.

Find right side of cashmere.

The right and wrong sides of cloth are sometimes difficult to distinguish. The right side has a finish and often a luster or a nap, while the wrong side shows imperfections in the weave or loose ends and joins.

Except when goods is less than 28 inches wide, it is generally folded on the double and creased in the center before it leaves the manufacturer. On cotton goods, the outside is usually the right side, while on woolens and heavy materials, also cloths with a luster like satin, the right is found on the inside.

For darning woolen goods use, if possible, a warp thread of the same material (as it is stronger than the woof) with a very fine needle.

To thread a cashmere warp thread in a No. 9

needle, take a short length of No. 90 or 100 cotton thread, draw the two ends together thru the eye of the needle, leaving a loop in which to slip the cashmere thread. Pull all thru the eye at once.

Make a three-cornered cut to be darned by folding the sampler on the warp, in the center, and cutting down from the center on the bias or diagonal, 1 inch. Baste a piece of paper on the wrong side of sampler to hold the goods in shape, and starting on the right side, at the right end, darn the cut, making the stitches at right angles to the direction of the slit. Take tiny stitches, keeping the edges together. Turn the angle at top by graduating the stitches until they are vertical with the top of the cut.

On the upper left side of sampler make a vertical cut 1½ inches long. Use the cashmere thread in the same way as before in darning, then cut a horizontal line 1½ inches to right of the vertical cut and darn.

Overcast all around the outside edge of sampler with the cashmere thread.

Remove paper and press well by placing a damp cloth over the cashmere and ironing until dry on the wrong side. Write name and date finished on a small piece of paper and baste on

sampler, in the triangular space that has been darned.

SEWING MACHINES

History—The first sewing machine was invented in 1755 in England by one Weisenthal. It was used wholly for embroidery and made a tambour or loop stitch, a name derived from the two-pointed needle with the eye in the middle. Thomas Saint, an Englishman, brought out the second invention. This was a machine for quilting and stitching. The third invention came from a Frenchman named Thimonnier, who endured many hardships in his efforts to introduce it into France. He made a large number of machines, the first of wood, only to have them twice destroyed by mobs of infuriated tailors and sewers who condemned him for depriving them of their trade. He died in poverty, still fighting his oppressors.

The first notable improvement came in 1846 with the invention of Elias Howe, a native of Massachusetts, poor in health and purse, and whose struggle for recognition was likewise embittered by those who plied the needle and refused

to use his machine. The shuttle which he conceived formed a lock stitch, the Wheeler and Wilson machine being the outcome of his patents, and the first sewing machine manufactured. Grover and Baker followed with still another improvement; then came the Singer. Howe was paid a royalty on each machine made from his patent, so that, unlike his predecessors, he became wealthy.

In 1857 a new machine was invented by Wilcox and Gibbs. This machine did away with the bobbin, making instead a chain or loop stitch. In these days of machinery and progress, hundreds of machines are turned out of various makes, grades and quality, but sewing machines are divided into but two classes—the chain with its automatic tension and using but one spool of thread, and the lock stitch with its bobbin and sometimes a shuttle, using two threads. The sewing machine is run by power, foot or hand. It is poor economy to buy an inferior make, for it is impossible after a lapse of time to secure duplicate parts or new needles.

The instruction book accompanying each machine should be followed closely. Most machines thread differently, the wheel revolving in opposite directions and thread will break if started

wrong. The machine is the servant of the hand and should be studied and mastered. To keep clean, well oiled (but not over much) and in good condition—covered when not in use—will keep the machine in easy running order. Learn each detail of its construction from stand to attachment.

Attachments—The attachments save time and work. Directions for their use are in the instruction book and should be learned. The principal ones are the guide, hemmer, feller, gatherer, tucker and binder. On the lock stitch machine most of these attachments necessitate the removing of the plain presser foot used for ordinary stitching and using a special one; on the automatic the same presser foot is used for all.

Adjustment and Length of Stitch—The size of needle to be used and the relation of the thread to the stitch vary according to the thickness of material to be sewed. On the plate of the **automatic** machine the numbers and stitches are explained, the length of stitch being regulated by a sliding lever attached to the plate.

The tension should never be oiled or disturbed, as it adjusts itself automatically to the proper stitch.

On the **lock stitch** machine, the stitch is regulated by the turning of a thumb screw which is found near the bobbin winder.

Other makes have the regulating table for stitches on the plate with a screw sliding to right or left according to size desired.

On any machine this table of stitches indicates the number of stitches to an inch. Thus, 22 stitch means 22 stitches equal one inch.

In testing stitches use two or more thicknesses of cloth.

Fastening—With the lock stitch machine the threads are fastened by drawing the top thread thru to the wrong side and tying to the under thread.

With the chain stitch machine the thread is fastened by raising the presser foot and moving the cloth back to the preceding stitch so the needle will enter this last hole a second time. This makes a double knot.

If sewing to the end of cloth, run off a few stitches beyond the cloth.

The chain stitch is similar to the plain cro-

chet stitch and unravels easily from the end last stitched. When broken or cut, pull the end thru the last loop and fasten by threading and making a back stitch.

To take out the lock stitches, pull thread from end last sewed, first on right side of cloth and then on wrong side, or if a seam is to be taken out, hold cloth on wrong side and pull thread first from one side and then the opposite. For tailored work a sharp knife is used.


Name

SAMPLER NUMBER FOUR

MACHINE WORK

This sampler is made with the lock stitch machine as the chain stitch machine has no binder attachment and also has a more definite right and wrong side, thus making it more complicated to do. However it is not necessary to use a binder attachment for binding a raw edge, and other ways will be explained under the directions for the machine binder. The attachments used for this sampler are the tucker, gage or guide, hemmer, gatherer and binder.

Cut three strips of cloth 12 by 3 inches, one straight and two bias,—the straight with the length on the warp, which can be torn. These strips are joined together with French seams.

A **French seam** is made by joining two raw edges of cloth on the right side and stitching

them as near the edge of the cloth as possible, then turning the material on the wrong side, with the inverted seam on the top edge (which is easiest done by creasing the seam flat before turning on the wrong side), then stitching these two pieces of cloth only deep enough to hide the raw edges of the first seam. From 1/16 to ⅛ of an inch is the depth of the first seam, and it is most important that this seam should be straight before turning for the second seam. Goods that fray may need a deeper seam. A French seam is used for all garments, particularly for underclothes and on sheer materials and is the neatest way of finishing seams. The three strips of cloth used to make the sampler are joined in the following manner: the straight piece is pinned to the bias, without stretching the bias beyond either end of the straight, then basted with an even baste stitch holding the bias piece on top. Join the second bias strip to this bias, pinning and basting in the same manner. Stitch as explained in the French seam.

Tucks—On the straight piece, ¾ inch from the long, raw edge, measure and crease a line across the strip for tucking. Fasten the tucker attachment to machine plate. Gage this ad-

justment until it makes a 1/8-inch tuck and the marker spaces 3/4 inch, marking a straight crease while the first tuck is being stitched.

This crease is to be folded and stitched 1/8 inch for the second tuck, the space marking off 3/4 inch as before.

Make three tucks in this manner.

Before turning wrong side out, crease flat the stitched seam so there will be no folds or ridges when basting this second seam on the wrong side.

Machine Guide—On the outer bias strip, 1 1/2 inches from the raw edge, crease as for a tuck the length of strip. Adjust the machine guide attachment, gage it for 3/8 inch, and stitch tuck.

Hemmer and Gatherer—Cut or tear a strip of cloth 20x3 inches for a ruffle. One of these long ends is to be hemmed, the other is to be gathered. Adjust the No. 1 narrow hemmer attachment. The under side of the hemmer foot shows the width of the hem. To start the edge in the hemmer, fold the end about an inch so that it may readily slip into the adjustment. Stitch this ruffle. Remove the hemmer and adjust the gatherer attachment.

The gatherer attachment can be regulated to

gather any fulness desired to the inch. This 20-inch ruffle must be gathered to fit the 12-inch edge of the straight strip. Test the gatherer attachment by increasing or decreasing the fulness of gathers with the screw until it equals the straight piece.

The ruffle can be gathered and sewed on to straight piece at one stitching, by putting the straight piece underneath and sewing the ruffle on the right side below the tucks.

This seam is covered with a bias band. Cut a strip of same material ¾ inch wide. Baste this over the gathered side of seam, stitch and turn band over flat. Turn under raw edge making band ¼ inch wide. Baste down, and stitch as near each edge as possible.

Binder—Cut a bias strip ⅞ inch wide, about 30 inches long to bind edges of sampler. Adjust binder attachment.

To put a bias strip into the binder attachment, cut end of strip diagonally and with the stiletto work this end into the attachment. Fold the bias strip with the right hand while stitching, making the fold even, so that the stitching will catch both sides at the same time.

Care must be taken to keep the tucks and

seams in their right positions and to allow sufficient fulness in turning the corners.

On the middle strip of cloth write the pupil's last name in as large letters as the space will allow, with an even distance from either end. Stitch this outline on the machine with coarse, black cotton (No. 40). Use white thread on the bobbin and start at end of last letter, working toward the front. Use the embroidery presser foot if the machine contains this attachment, which is a short split foot, and enables the outline to be readily followed.

SAMPLER NUMBER FIVE

BUTTONHOLES AND LOOPS

Cut or tear a strip of cloth 12 inches long on the woof and 3 inches wide on the warp. Turn over the raw edges and fold on the length, basting and stitching the edges as near as possible. By cutting the cloth this way, the buttonhole stitches are worked with the warp of the goods which is easier sewed than with the woof.

In the center of the cloth, ¾ of an inch from the top, and ¾ of an inch apart, cut 9 buttonholes ¾ of an inch long. Use buttonhole scissors and cut each line parallel. To cut a buttonhole the correct size for a button, measure the diameter of the button, allowing it to slip thru easily. They may be cut vertically or horizontally, the first being mostly used on waists, corset covers, night gowns, etc., while the horizontal

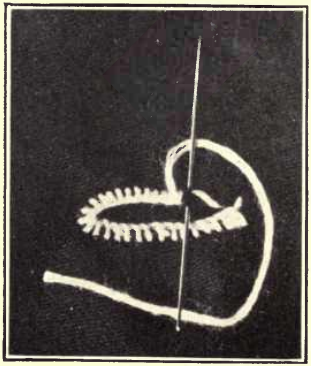
ones are used on belts, coats and on waists where the buttonhole is visible.

The ends of a buttonhole may be worked in three different ways, namely: fan ends, bar ends, or bar at one end and fan at the other. The fan ends are the strongest, but the bar and fan is perhaps the most used. The first three buttonholes on the sampler are worked with the fan ends, as these are the easiest; the second

three with the bar and fan ends, and the last three with the bar ends.

The fan end simply means a continuation of the buttonhole stitch all round the cut, and is not used for large buttonholes, because it tends to increase the size of the buttonhole, while the bar end does not. When the bar and fan ends are to be used, the end that receives the strain of the button, is the end to be worked with the fan.

Having cut the buttonholes, start with the top one, holding stitched edge of sampler to the right and fold at left, beginning at stitched edge each time in working. Use No. 40 thread, and cut it long enough to complete one buttonhole. With no knot in thread, overcast the raw edges of the cut, making 4 or 5 stitches on either

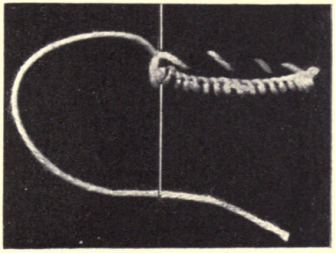


side only deep enough to keep the cloth together and from fraying. Without breaking the thread, commence the first buttonhole stitch.

The **tailor's buttonhole** is worked by bringing the needle up on the right side of the cloth, just deep enough to cover the overcast stitch. Before pulling the needle thru, take the thread

that hangs from the eye of the needle and throw it under the needle from right to left. This makes a little loop or knot which is pulled thru tightly so it comes on the edge of the cut.

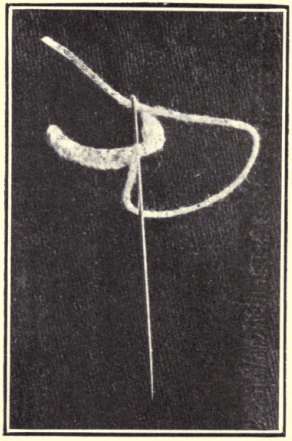
Form each stitch like the preceding one and so close that there will be no space between the loops or knots, and the depth of each stitch will be uniform. The thickness of thread used in working the buttonhole may be the guide for



allowance of space between each stitch taken. Consequently, the finer the cotton, the closer the stitches and the coarser the cotton, the greater the space. In working around the curve, spread the stitches a trifle, but evenly, in order that the knotted edge will not be overcrowded; this is the fan end.

The opposite end is the bar end, when the

bar and fan ends are both used. To make a bar end take three over and over stitches, connecting the first and last buttonhole stitches on either side. If the goods fray so it is impossible to work a buttonhole, before cutting, make two rows of stitching ⅛ inch apart on the machine, the de-



sired length of buttonhole, and cut between them with a sharp knife. If the goods is very sheer, a piece of cloth basted on wrong side, then cut and worked with the buttonhole, will give it added strength.

The above description is the only true method

of making the tailor's buttonhole. The embroidery buttonhole is not worked the same, nor is it as strong.

Loops are often used in place of buttonholes, especially on thin material. Mark line where loop is to be; with No. 40 cotton thread, sew 4 strands the same length as mark, making them large enough to slip over button used. Starting at left end, buttonhole over these four strands, thus forming a cord. Use a small pencil or stiletto to keep the strands in place, and fill the space, pulling each stitch tight. Finish on wrong side, with an over and over stitch.

Press this sampler on wrong side, stretching the buttonholes on the length to close the spaces. Attach name and date.

APRON

Material, 2½ yards gingham (1 yard wide) for apron 32 inches long.

Measurements:

Waist (Model 24 inches).

Length of dress (Model 32 inches).

When buying material for apron, allow for twice the length of the dress skirt, and three

inches on each strip for the hem (6 inches in all). First cut or tear either end of the strip of cloth, with the woof thread; then cut in halves.

If a plaid, match. From one of these pieces tear a 2½-inch strip (this allows for seams), on the selvage or straight; this is the belt. The

other piece of cloth is split in halves on the warp, thus making two ½-yard strips. Join each narrow strip to either side of the wide piece, pinning and basting on right side for French seams. If one edge is selvage and the other not, tear off the selvage edge. When the selvages come together, a French seam is not necessary except when it corresponds with another seam. When the apron is properly seamed, hem the two sides, with the ¼-inch machine hemmer. Turn a three-inch hem on the bottom of apron, making the French seams turn toward the outside. Pin first, then baste and stitch on the right side. Find the center of the apron at the top, and cut a small notch at this point. Make two rows of gathers across the top, ¼ inch from the edge and ¼ inch apart. Commence at the right edge, with the knot on wrong side of cloth, using 50 cotton. The length of the thread should be longer than the belt measurement, and when the space is gathered, do not fasten this end with a knot or back stitch, but hold the threads in position by placing a pin at right angles with the gathers, and winding the thread over and under it several times. After the belt has been stitched, these ends should be fastened.

Cut off the belt to equal the waist measurement, plus 3 inches. The extra inches are used for an inch and a half lap, and ¾ of an inch is turned in on each end. Turn under the long edges of the belt ¼ of an inch, creasing the strip in the center. It will then be 1 inch wide on the double. Pin the gathers to lower edge of wrong side of folded belt, starting and ending them 3 inches from either end of the belt, the center of apron meeting the center of belt.

The gathers should not be as full in the center of the front, and the French seams should be the same distance from the center. Baste the gathers closely and evenly, then bring down the top edge of the belt over the raw edges, baste and stitch on the machine, close to the edge.

Make a buttonhole on right side of belt ½ inch from edge, and sew button on left end. Over stitch small and neatly the ends of the belt and hem. Tie, fasten and cut all thread ends. Press on right side, dampening if necessary any wrinkled places.

Make a hanger 2½ inches long (finished) and ¼ inch wide (finished) and fasten to the center of belt on the wrong side and at the lower edge. Baste a small card with name, class and date finished (written) on it, in the center of the belt.

IRONING

The use of the iron is the last touch on finished work. It should be taught as soon as the first article is completed. Pressing is simplified by conveniences and shapes of all sorts. The skirt board, the egg or sleeve board, the tailor's pad, the seam board are all necessary for their respective work.

The board must have a smooth, tightened surface of heavy cotton, either bleached or unbleached as sheeting (never a twilled or corded cloth) with a good padding underneath. Tack or fasten this padding to the board as it is not to be removed. Cotton blanketing doubled is recommended for padding. The outer sheet of all should be stretched firm and smooth and never allowed to become so worn and soiled that the padding will also become dingy.

Irons of medium size and weight (7 pounds), either pointed both ends or triangle shape, are used for ordinary pressing. Tailors use a goose iron from 10 to 16 pounds. It is long and narrow with a short, blunt point.

The sleeve iron is very narrow, with a long point in order that it may reach into the gathers of the sleeve. A later design of sleeve

iron is made egg shaped with a handle for heating, which rests on a stand about a foot high. The sleeve is then passed quickly over this heated surface. The sleeve board is also long and narrow and is mounted on a base or stand, so the sleeve will slip over it and can be turned on all sides; the ends are rounded, one being larger than the other for the top of sleeve. The entire length of the board is about the length of the average sleeve.

The skirt board is also shaped larger at one end than the other and should be longer than the skirt length. A satisfactory board is 1¾ yards long by 14 inches at one end and 7 inches at the other.

There should be a stand for the iron together with cloth, wax or paper for cleaning it, and a sponge or cloth for dampening materials used. If too hot, the iron will scorch, if too cool it will smirch and leave a yellow streak. When rusty, clean iron with sand soap or fine sand paper, rubbing over wax or paraffin. With starched and white pieces this is especially necessary. Different materials are treated differently. Cloth with a nap should be pressed the way the nap runs. Silk should not have too hot or heavy an

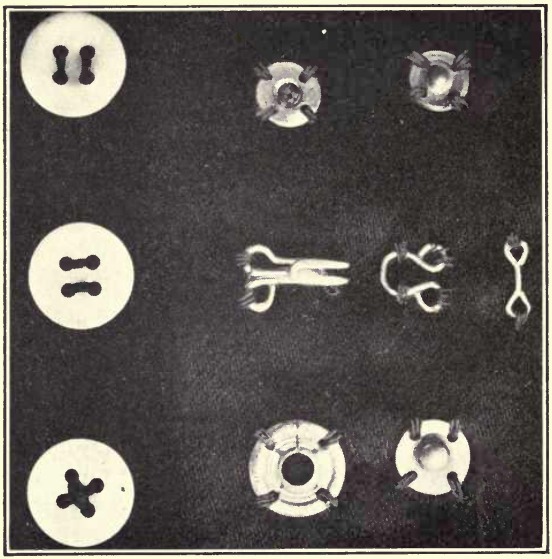
iron, as the stiffness will come out. Serges and woolen goods must not be pressed too heavily or too dry, and never on the right side, without a cloth over it as it becomes "shiny." With some shades of cotton, linen, etc., a chemical action takes place if too hot an iron is applied, and the color can not be restored.

HOW TO SEW ON BUTTONS

Four-holed buttons are fastened to material either by crossing the threads or by making the threads parallel, either horizontally or vertically. The crossed threads are used for underclothes. Parallel threads are used for coats, outer garments and men's clothes.

Use coarse cotton, No. 36 or linen not doubled. Begin with the knot on the wrong side, or on the right side, with a back stitch and no knot. The button can be made to stand out from the goods, as on coats, by putting a small pencil or penholder between the button and cloth, sewing on button, then drawing away pencil and winding the extra fulness with thread. Before fastening on wrong side, always wind the thread under the

button four or five times to give extra strength. Sometimes a small button is put on the under side and worked thru at the same time.



HOOKS AND EYES

Hooks and eyes are used as a mode of fastening a garment or any article, where buttons and buttonholes or ball and sockets are not desired,

or can not be used. They bring two edges together without over-lapping, as tight linings; or are used for laying and fastening one edge over another so it will be flat, as plackets.

Hooks and eyes are manufactured in sizes from 000 to 6, and in colors black, white and gilt. Different varieties and sizes are used for certain parts of a garment, as No. 4 hooks and eyes for belts on skirts, No. 2 for skirt-placket, etc. Hooks are made plain or with a hump, to prevent slipping. Eyes come in round and flat; the round being used for edges and the flat for lapping. To sew on hooks and eyes, match the places where they belong, by holding the two pieces of cloth or edges together and mark, spacing evenly with pins or pencil dots. Hooks are sewed on first in most all cases, and when many are to be used, the thread is carried from one to the other. Use coarse cotton, silk or twist as the textile requires. If cotton thread is used, do not double; if silk, wax. Always sew hooks far enough from the edge so they can not be seen from the outside. One quarter of an inch is a good distance. To sew on hooks, commence at the right and sew to the left, holding the hook in place with the thumb of the left hand, and let

the edge of the hook come where the pencil dot or mark is. Commence at lower edge and go thru right hole five times, then the left. Carry the thread to the top of the hook, sewing it thru to the cloth five times, then passing on to the next one in the same manner. To sew on the eyes, hold the center of the eye over the mark made to match the hook, sewing thru each hole five times, and passing to the next one in the same way, for the flat eyes. If the round eyes are to be used, beside sewing thru each hole the five times, fasten each one just below the curve at the top on either side, to make more secure.

BALL AND SOCKETS

Ball and sockets are used to lap flat surfaces together, and are preferred by many to the hook and eyes. They are manufactured in four sizes and in colors black and white. They are more expensive than the hooks, and sold with a dozen on a card. As they are fitted on the piece of cardboard on which they are sold, so they must clasp together in the same way on the cloth. Some are made from a solid piece of tin, while

others have a slit or a join. When the latter kind are used, never let the join come on the outer edge as it springs the socket out of shape. It is not necessary to space them as closely as hooks and eyes, an inch and a half or three quarters for the smallest size, and the larger ones near enough to prevent gaping. After marking the places they are to be attached, hold the socket part on the top or upper side with the center over the mark and fasten securely in each hole (there are generally 4 to each part). The part of the socket that shows is the wrong or under side. The ball piece fits in the center of the socket and may also be matched to it by placing a pin thru the hole in the socket having the lap of cloth in just the right position as when finished.

TEXTILES

Cotton

Cotton was known as early as 450 B. C., where in India, it superceded all other fabrics.

It is a tropical plant, the United States growing three-quarters of the world's present supply. Texas leads in this industry, although California now bids fair to outstrip all other states.

The cotton flower or boll,—that soft, downy, white bloom, that bursts from the dry pod—has given to the world one of the greatest products in existence, and has reared manufactories from which have branched thousands of allied industries, both domestic and foreign, that have no equal on the globe. The great mills with their tall black chimneys towering skyward, and the little villages nestling around them, and sheltering the population of cities, turn out yearly endless quantities of fabrics to supply an ever-increasing market.

The din and roar of these mighty factories along the quiet New England rivers have developed one of the world's greatest industries. est industries.

Until the last century the cotton fibers were sifted, carded and spun by hand, but the invention of the cotton gin by Eli Whitney in 1872, has opened up the great industry of cotton manufactures.

After the pod bursts open, the white mass is picked and thrown into baskets from which it is emptied into the hopper of the gin, where it emerges, dirty but free from seeds, which in turn are pressed out and the oil from them sold. The

cotton is packed into bales, weighed and shipped north and here begins its manufacture. It is sorted out and bought up by consumers, according to use. Cotton brokers are deft in their touch and by breaking the raw material can tell at once the quality of fiber, the long staple fibers bringing better value.

From gin now to factory the cotton is turned into carding machines where great revolving combs and brushes clean out all foreign particles. These wide, white sheets of raw cotton emerging from the carders are then condensed into a narrow stream of white substance called a sliver, which by twisting and doubling and spinning with other slivers comes forth a tiny thread of varying size, which after various processes of creeling, finishing, dyeing, etc., becomes the finished product on the spool.

These spools are then placed on looms where they are woven as warp or filling threads into cloth. They are also sold as sewing cotton. The process of weaving is an industry by itself. The methods of weaving stripes, checks, diagonals, twills, etc; the endlessly new processes of dyeing, finishing, etc.; the inspiring history of new inventions make textile study one of absorbing

interest. The Jacquard machine, invented by a Frenchman which weaves isolated designs by means of cards punched and running on chains, can not like the first cotton gin be improved upon. The textiles schools of our East have no equal.

There are many varieties of cotton, according to the country raised in. The longest fibers are used for sewing thread and are often mixed with silk. In many places the boll weevil, a small insect, destroys the entire crop. Eastern countries produce a yellow cotton, but the finest of all comes from the South Sea Islands and the Florida coast; the fibers are about 2 inches long.

Besides cotton, flax, ramie, hemp and jute and the so-called China pineapple grass are vegetable products.

Heat does not affect cotton, but acids change it. Mercerized cotton is produced by a solution of caustic soda.

The price of pure cotton cloth ranges from 5 cents to 50 cents per yard.

LINEN

FLAX, RAMIE, HEMP, JUTE, CHINA PINE-APPLE GRASS

These are vegetable products used for weaving.

Flax is a small annual plant 1 to 3 feet high with a blue flower, and is grown in all parts of the world.

Linen fiber is procured from the flax plant—from the seed is made linseed oil. The linen fiber is separated from the flax stalk by soaking or retting the stalks in water about 5 days, drying, then cleaning or hatcheling the impurities from the linen fibers. This fiber is from 1 to 12 inches long and tho less elastic than the cotton fiber, is valuable for its strength, whiteness and silky luster. From these long, silky fibers or line are made damasks, lawn, laces and handkerchiefs; the short fibers or tow are woven into coarser stuffs. Linen is a better conductor of heat, but does not dye or bleach as well as cotton. In price it ranges from 40 cents to $3 or $4.00. Linen is the oldest of all textiles. The Egyptians used it for embalming and linen pieces

4000 years old have been excavated. To detect linen from cotton,—the linen will be found to absorb water more quickly than cotton.

Ramie, hemp and jute are tropical vegetable products with coarse, tough fibers. Ramie is covered with a gum difficult to remove. From ramie are manufactured grass cloth and cheaper cotton substitutes. Hemp and jute have very strong fibers which are made into rope, mats, and rugs, and coarse weaves. These three varieties are called "stem fibers."

The **China grass** of China and Japan and the **Pineapple grass** of the Philippines make strong, sheer and beautiful textiles.

WOOL

Wool is the fleece of the sheep, goat, alpaca and camel. The warmth, softness, strength and susceptibility to take dye render wool the most valuable of all textiles. Its quality depends upon the climate, food and shelter of the animal.

Wool is first sorted into two grades—the long and short, staple—according to length. The oil is then removed by scouring, in which process it loses about one-half its weight.

The long stapled wool is combed to lay the fibers parallel, which are spun into worsted yarns for hosiery, carpets, etc.

The short staples or noils are woven into dress goods.

Shoddy or waste is used for filling weaves in cheaper materials.

From the Angora goat is manufactured a very fine, silky mohair.

The merino sheep—originally from Spain—has also a beautiful staple.

Alkali and high temperature injure the staples which, however, resist the chemicals used in coloring.

To test woolen cloth, apply a lighted match to the warp and woof threads. Pure wool will not burn but shrivels and gives off a disagreeable odor; the cotton or linen threads will burn.

SILK

Silk, the most perfect of all fibers, is obtained from the cocoon of the silkworm and has few, if any, impurities. It is divided into two classes, the cultivated and the wild, the latter being found principally in Southern Asia while the cultivation of the former (also produced there) is one

of the chief industries of Southern Europe. The finest quality comes from the worm fed on the mulberry tree. The silk fiber is spun from the head of the caterpillar in one long continuous strand often measuring over a thousand yards which is thrown irregularly back and forth while forming the cocoon, being thickest on the outside, where the spinning or weaving commences.

After the cocoons are spun, the pupae (or chrysalis, which emits as the moth) are generally killed by means of steaming, after which the cocoons are sorted according to quality, the best being used to produce warp threads, the purer grades (called tram) for the woof. After drying, the long fiber is reeled off, when it is known as the "raw silk" of commerce.

This raw silk is woven into fabrics or twisted and doubled with other silk fibers for embroidery silks.

There are many varieties depending on food, cultivation or country; the wild containing the impurities, which in the process of dyeing, especially black, renders the fabric stiff.

More than two thousand years B. C., the Chinese wrought beautiful fabrics of this wonderful fiber, which has ever since proved to be the choicest of all textiles.

PART ONE—QUESTIONS

1. Name all the plain stitches and their uses.

2. State differences between the overcast and the over and over stitch.

3. Explain how a corner is mitered.

4. Describe needles and their sizes.

5. Describe threads and their various uses.

6. The patch—how applied on cotton? on woolen?

7. How do all plain stitches begin? In what direction are they sewed?

8. Explain method of darning and pressing a woolen tear.

9. Explain warp, woof, bias and crossway.

10. Write brief history of sewing machine.

11. Explain lock stitch and chain stitch.

12. Name all parts, adjustments and attachments of a machine.

13. Compare sizes and makes of machine needles and corresponding thread with sewing needles.

14. What is a French seam and how made?

15. In joining straight and bias edges, which should be on top? Why?

16. Describe the different ways of making buttonholes.

17. Explain and illustrate the buttonhole stitch.

18. When and how is a loop made?

19. Describe the proper method of making an apron that, when finished, will be 1 yard long and 24-inch waist.

20. How is a belt put on?

21. Explain different ways of sewing on buttons; hooks and eyes; ball and sockets.

22. Write brief history of cotton and its manufacture.

23. What is linen and how tested?

24. Write brief facts about wool.

25. Where does silk come from?

PART TWO

DRAFTED GARMENTS

For Cotton Materials:

Drawers.

Five gored underskirt with dust ruffle and flounce.

Shirt waist draft without sleeve.

(a) Corset cover.

(b) Chemise.

(c) Night gown with sleeve.

Plain tailored shirt waist.

Plain five gored dress skirt.

Kilted or pleated skirt.

Underskirt with bias flounces; circular upper made from five gored skirt draft.

French lining draft.

For Woolen Materials:

Seven gored skirt.

Nine gored skirt.

Designed waist on shirt waist pattern.

Coat.

The value of drafting patterns and making dresses by the girl at school can not be overestimated. It should not only relieve the mother at home from the continual strain of dressmaking, which renders the clothing of a daughter so much

more expensive than a son, but it should also teach the girl important facts—the labor of clothing herself; the comfort and beauty of a home-made wardrobe; the importance of textiles; in fact, the economics of this home industry; and, if necessary, a trade.

To draft a pattern, measurements of the person to be fitted must be taken accurately. A tape measure is used, and the 4ths, the 8ths, 16ths, etc., of an inch must be thoroughly understood at the outset. All measurements should be tested, so, when cut out on the cloth, there will be no mistakes. Only one-half of a paper pattern is drafted—as, the left half of the waist. The opposite side is cut at the same time from the goods, which is folded double, with either the two right or the two wrong sides facing each other.

No allowance is made for seams in any of these drafts, unless specially mentioned, as in cutting, it is not always possible or necessary to allow the same amount of space on all seams. However, by tracing around the edges of the paper pattern, any width can be allowed that is desired.

The **fitting** or **sewing line** is that edge of the

paper pattern, where the seam is to be joined or turned, consequently it is traced and all seams must be matched and basted on these lines.

A **lengthwise fold** is a warp fold.

A **crossway fold** is a woof fold.

Neither are seams.

The **alteration seams** should have an allowance of ¾ of an inch, and they will be explained as each garment is drafted and made.

Study the proportions of yourself and others, as well as of the perfect model given, and know what is lacking to make certain measurements correct. After cutting the plain pattern, make variations from it if desired—designs of lace, tucks, etc., may be worked up—but the fundamental lines must not be destroyed or made disproportionate thru ornament. It is therefore advisable to first make one plain pattern of each draft.

Commencing with the simplest drafts we progress to the more complicated in the order outlined, the plain shirtwaist draft being used for the corset cover, chemise and nightgown.

Equipment—A yardstick or 45-inch rule for drawing long lines; good quality drafting paper, 36x18 inches; long shears and scissors (steel, not

cast); tailor's chalk (mixed colors); and tracing wheel. The cutting table should be large enough to include the full length of a gown, and wide enough for at least the widest single pattern, as the back gore of skirt. For the schoolroom, a fitting room is necessary for trying on dresses and other garments.

This room should have a cheval glass, hand mirror, pin cushion filled with long, good steel pins, and a round 2-ft. diameter or yard-square stand, 6 or more inches from the floor—the adjustable ones are best—for draping or turning up the bottom of a garment.

Combination forms in 32, 34, 36 bust measure, or the single bust forms in these sizes, and the separate skirt models in 38 and 40 hip, are necessary. If the choice in purchasing lies between a small and a large sample, take the smaller, as it can be padded, while the larger would be impossible to use.

A sleeve form is also a great convenience and help.

Proportions of a Model

Waist, 24 inches.

The neck should be ½ the waist.

The wrist is ½ the neck.

The armseye is about 2 inches more than neck.

Around elbow 3 inches less than around armseye.

Height equals distance from fingertip to fingertip, arms outstretched.

Hips should be 15 inches larger than waist.

Hand, 2 inches larger than wrist.

DRAWERS

Measurements:

Waist—Place a tape measure around the smallest part of the waist.

Hips—With tape measure on waistline, measure 6 inches below, over fullest part of each hip, and pin. Place tape measure below pins and measure around easily.

Side length—Measure at side from lower edge of waist over hip to bend of knee.

Easy measurements should be taken for all underclothes, to allow for shrinkage as well as comfort.

DRAFT

Material, 1¾ yards cloth, 36 inches wide. (Cambric, long cloth, Fruit of the Loom, Pride

of the West, etc. Price per yard, 6 cents and upwards.)

Waist. (Model 24 inches.)

Hips. (Model 39 inches.)

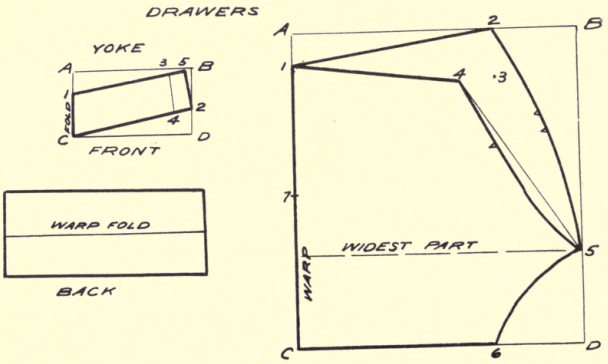
Side length, including ruffle. (Model 22 inches.)

Side length, without ruffle. (Model 17 inches.)

Width at fullest part. (Model 17 inches.)

Width at lower edge above ruffle. (Model 12 inches.)

Depth of ruffle. (Model 5 inches.)



Note—With each draft, is given a model size of measurements, which must be altered and the pupil's own measurements substituted.

Construct a rectangle from the following measurements: for the vertical sides, take the **side length** measurement less the ruffle, plus 2 inches; for the horizontal sides take 1/3 the hip measurement, plus 4 inches, or the width desired (which is governed by fashion)—17 inches are given in model, as cotton cloth generally comes 36 inches wide. This width will require no piecing; if piecing is necessary, it must be done at the back. Take ½ sheet of drafting paper. Double the paper twice the size of the rectangle, having the fold on the left while drafting. Mark the top corners A and B, the lower C and D as illustrated.

Dot 1 is the side length measurement up from C, deducting the depth of ruffle first.

Dot 2 is one-half waist measurement to right of A. Connect 1 and 2 with straight line.

Dot 3 is 3 inches below Dot 2.

Dot 4 is 2 inches to left of Dot 3.

Connect 1 and 4 with a straight line.

Dot 5 is one-third the side length measurement up from D, after deducting ruffle. Connect 4 and 5 with straight line, then with a left curve, rounding more at base. Connect 2 and 5 with a right curve.

Dot 6 is one-half the waist measurement, or any number of inches which fashion may dictate, to right of C,—12 inches is given as model, which allows 2 yards of ruffling to complete the garment.

Connect 5 and 6 with a left curve.

Dot 7 is 7 inches down from Dot 1, and is the depth of placket.

If drawers are to be opened on one side only, make Dot 7, 8 inches down from Dot 1, on either side desired. The right side is generally preferred. On line 1 and C write "warp."

Cut on the double fold of paper, on lines 1, 2, 5, 6 and C. Open pattern and on single thickness, cut on line 1, 4 and 5.

Make one small notch on short side between 4 and 5 which is the front; two notches between 2 and 5 which is the back; a notch on Dot 1 and C. This is half of the pattern, so that the cloth must be laid double when cutting. If cloth is in one piece, fold on woof with selvages together, only deep enough to allow for cutting material and its allowance for seams Pin pattern to cloth on the line of warp, measuring from the selvage edge to make sure this line is on the straight. Trace around edge of pattern with a tracing

wheel. Allow when cutting, ¾ inch on front, back and curved seams, and ¼ inch on upper and lower edges of pattern.

Cut out, making small notches outside the traced line, where indicated on draft. Match back and front seams, pinning, then basting on traced or sewing lines for French seams. The short seam with one notch is the front one, the long with 2 notches, the back seam. Next join the short, under seams—that is, line 5 and 6 in the draft, making French seam or stitching flat.

A **flat seam,** also called **felled,** is made by sewing on the wrong side of goods, first, on the sewing line, leaving ¾ inch outside the stitching. Cut off one side close to seam, then fold wider edge flat as for hem. If fold is laid on a curve, snip turned edge, to prevent wrinkling. Stitch on edge. Felling may also be done with the narrow presser foot hemmer on the lock stitch machine, or the wide hemmer on the automatic. A French seam may also be sewed flat, but is thicker.

To finish placket, cut a strip of cloth, twice the depth of placket (warp cut) and 2½ inches wide (woof). This width allows for seams, making lap 1 inch wide when finished. Stitch

edge of lap and the torn edge of placket together on right side, with the narrow strip underneath. Fold the opposite edge of strip to cover the seam, making 1 inch finished. When attached to waistband, the back lap turns under the belt, and the front lap is extended.

Gather top of drawers across front and back with two rows of gathers, ¼ inch apart, the first row on the traced line, the second, below.

A **yoke** is made for the **front** of drawers, the draft is as follows:

Construct a rectangle, the horizontal lines being ¼ the waist measurement (plus 1 inch for lap); the vertical, which is the shorter side as well as the straight or lengthwise, is 4 inches. Indicate corners A B C D. Let A and C be on a fold.

Dot 1 is 2½ inches up from C. Connect 1 and B.

Dot 2 is 1½ inches down from B. Connect C and 2.

Dot 3 is ¼ the whole waist measure on line 1-B, measuring from Dot 1.

Dot 4 is 1 inch to left of 2 on line C-2. Connect 3 and 4 and trace.

Dot 5 is 1 inch to right of Dot 3. Connect 5 and 2.

Cut out on 1, 5, 2 and C.

Open up pattern, and on a double thickness of cloth with the straight of goods even with the crease in the paper pattern, trace around, allowing ¼ inch for seams. Cut out. Baste these two pieces on the top edge and sides, and stitch on traced lines. Turn inside out and baste around the stitched edge, snipping cloth at center front to prevent puckering. On both sides turn in lower edge at tracing.

The point of the yoke is middle of front. Match center of drawers to this point, pin and baste along traced line on under yoke piece, scattering the fulness. The upper part of yoke is brought down over this seam, covering it.

Stitch all around edge.

Back Yoke—Cut back band ½ the waist measurement (warp) for length, by twice the distance of Dots 3 and 4 on front yoke draft. Trace and cut, allowing for seams. Fold belt on width, and stitch ends together. Baste back-gathers into band like front, the seam in the body of drawers meeting the center of belt, with more fulness toward the center. Stitch all around edge.

Ruffle—Cut or tear two strips of cloth, once

and a half the distance of lower edge of drawers, and 5 inches deep, allowing for seams, hem and tucks. Cutting 7 inches makes a ¾-inch hem, and five ⅛-inch tucks. Join ends of each ruffle with French seams before hemming and tucking, and have join meet seam on body of each side. If embroidery is used, match pattern. Before gathering ruffles, notch the center of each, then, with raw edges of ruffle and drawers together, pin, baste and stitch on the right side, making fewer gathers come on either side of the under seam.

Cover raw edges with bias binding or finishing braid, stitching without basting on outside edges, —the lower edge first, holding bias piece straight and firm. Make a horizontal buttonhole on either side of back belt, ½ inch in from edge. Sew button so underlap will not be seen. Press, using damp sponge or cloth to take out wrinkles.

Attach name of pupil and date finished.

SKIRT

Measurements:

Waist—Measure around smallest part of waist.

Hips—Measure 6 inches below waist as for drawers.

Front Length—Place tape measure in center of front at lower edge of waist and measure to floor. Take length of front gore only, of dress worn, the difference between the two being subtracted from the remaining gores.

Side Lengths—Measure from lower edge of belt line at side over the fullest part of the hip to floor. Measure each hip, and in drafting use the longer measurement, which is often the right hip.

Back Length—Measure from lower edge of belt line from center of back to floor.

Skirts are divided into three parts, the front, back and side gores. There can be as many side gores as desired, being designated as 1st, 2d, 3d, etc.

NOTE—This is the only skirt draft that is explained in detail, the succeeding patterns being worked out on these same principles, with the correct proportions given and the illustrations as guides. Notice specially the variations in lengths of each gore represented, i. e., "front," "side" and "back."

The full side length is measured on the side gore which is half way between front and back waist line,—each gore graduating in length and curve to equal the side it joins.

FIVE-GORED UNDERSKIRT

Material, 5 yards, 36 inches wide, with flounce of same material, or 3½ yards cloth and 4 yards hamburg or embroidery 12 inches deep.

Cambric, Fruit of the Loom, Pride of the West, etc., are suitable cotton cloths.

Write measurements as follows, each pupil putting her own measurements in place of the models given.

Waist. (Model 24 inches.)

Hips. (Model 39 inches.)

Width around bottom. (Model 2½ yards above dust ruffle.)

Lengths:

	Floor	Dress	Deducting Dust Ruffle
Front.	(Model 40.....	36.....	32)
Side.	(Model 42.....	38.....	34)
Back.	(Model 41.....	37.....	33)

No allowance for seams.

PROPORTIONS

1. **Waist**—Make width of front gore ⅛ of the whole waist measurement, or ¼ of half the waist.

Make width of side gore 1/6 of the whole waist measurement, or 1/3 of half the waist.

Make width of back gore, the difference between half the waist measurement and the sum of front and side gores.

2. **Hips**—Make width of front gore (6 inches below waist line) 1 inch larger than the front gore at waist.

Make width of side gore (6 inches below waist line) the same as side waist measurement, plus ½ again.

Make width of back gore (6 inches below waist line) the difference between half the hip measurement and the sum of front and side gores at hip.

An underskirt should be one inch shorter than the outside skirt, as well as narrower, except the flounce.

A dust ruffle about 4 inches deep is generally put on to prevent wear, while the flounce, which can be any depth, is added for flaring as well as beauty.

To save time, use hemmer and gatherer attachments of the machine.

For gathering, use No. 2 or 3 hemmer on lock stitch machine, or the linen or flannel hemmer on the automatic.

Gathering on the lock stitch machine may be done with the longest stitch, using a coarse upper thread to pull up into the required space.

The gatherer on the automatic can be regulated to fit space.

Halve and quarter ruffle and cut small notches, after joining ends.

Do likewise to bottom of skirt.

The average width of an underskirt on lower edge, before dust ruffle is attached, is between 2½ and 3 yards, for the average person, unless very wide skirts are in vogue.

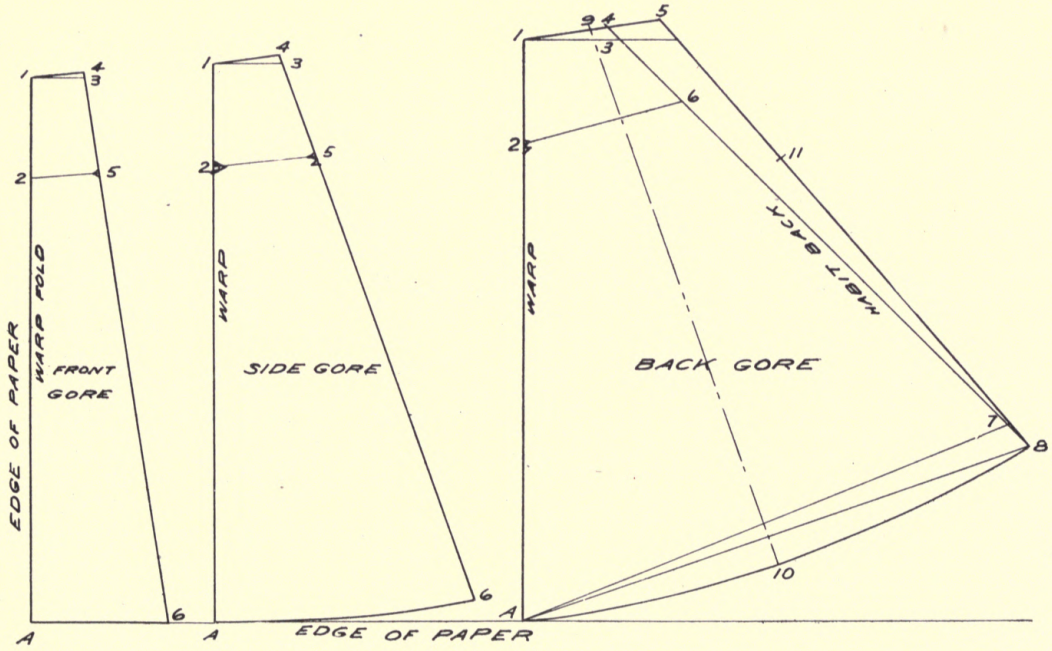
The dust ruffle and flounce have the same amount of fulness, which is equal to once and a half the distance around the skirt at the line where they are stitched on.

DRAFT

Front Gore

Take a full sheet of drafting paper.

Mark lower edge of paper A.


1
4
3
2
5
6
EDGE OF PAPER
WARP FOLD
FRONT GORE
A
1
4
3
2
5
6
WARP
SIDE GORE
A
EDGE OF PAPER
1
9
4
5
3
6
2
11
WARP
WEFT BACK
BACK GORE
7
8
10
A

Dot 1 is the length of front up from A. Use dress length and not floor length.

Dot 2 is 6 inches below Dot 1.

Dot 3 is a horizontal line to right of Dot 1, 1/8 the whole waist measurement, or 1/4 of half of it.

Dot 4 is 1/4 inch above Dot 3.

Connect 1 and 4.

Dot 5 is a line 6 inches below Dot 4, and the same length as line 1 and 4 plus 1 inch, to right of Dot 2.

Connect 2 and 5, making one notch on Dot 5.

With a yardstick on Dots 4 and 5, draw a straight line to meet horizontal line or edge of paper made at right angles with line 1, 2 and A.

Mark this point **Dot 6.**

On line 1 and A, write "lengthwise fold." Also "front gore" and pupil's name.

Side Gore

Mark lower edge of paper A.

Dot 1 is the length of line 4 and 6 on front gore, up from A.

Dot 2 is 6 inches below Dot 1.

Dot 3 is a horizontal line to right of Dot 1,

1/6 the whole waist measurement, or 1/3 of half of it.

Dot 4 is ½ inch above Dot 3.

Connect 1 and 4.

Dot 5 is line 6 inches below Dot 4, once and a half the length of line 1 and 4, to right of Dot 2.

Connect 2 and 5.

Dot 6 is a line drawn with yardstick on Dots 4 and 5, the side length measurement down from Dot 4.

Connect A and 6 with a slight downward curve.

Cut one notch on Dot 2 and two notches on Dot 5—the first on line—the other below it.

On line 1 and A write "warp," or "straight of goods," "side gore," and pupil's name.

Back Gore

Mark lower edge of paper A.

Dot 1 is side length measurement up from A, which is also the length of line 4 and 6 on side gore.

Dot 2 is 6 inches below Dot 1.

Dot 3 is a horizontal line to right of Dot 1, the sum of the front and side gore measurements substracted from half the waist measurement.

Dot 4 is ¾ inch above Dot 3.

Connect 1 and 4, and extend line 3 inches to right. Leave more if desired fuller.

Dot 5 is this extension.

Dot 6 is a line to right of Dot 2, the sum of the front and side gore measurements at hips, substracted from ½ the hip measurements. It must also be 6 inches below Dot 4 when line 4 and 6 are drawn.

Dot 7 is a line drawn, with yardstick on Dots 4 and 6, the back length measurement down from Dot 4. Connect A and 7, and write "habit back." Extend this line a few inches, then place yardstick on Dot 5, draw line the back length measurement down from Dot 5, to meet this line. This line being less bias, extends below the habit back line.

Dot 8 is this last measurement. Connect A and 8.

Dot 9 is half of line 1 and 5.

Dot 10 is half of line A and 8.

Connect 9 and 10 with a long, dash line, the back length measurement down from Dot 9.

Connect A and 10 and 8 with a slight downward curve.

Dot 11 is 10½ inches below Dot 5 on line 5 and 8, for depth of placket.

On line 1 and A, write "warp," "back gore," and pupil's name.

Cut belt pattern to equal ½ the waist measurement plus ½ inch, or the whole waist measurement plus 1 inch. This extra ½ or 1 inch is for lap.

Cut paper pattern of each gore and belt, on drafted lines, not allowing for seams.

LAYING PAPER PATTERNS ON CLOTH

Have material smooth before placing patterns on it.

As the center of front gore is laid on a lengthwise fold, double the cloth accordingly, to equal the width of gore at bottom, allowing for seams, or in the middle, if the cloth cuts to better advantage. Have widest part of gore at the raw end of material to save cloth. It is an advantage to lay all the patterns on the goods before cutting. Follow the warp as indicated on each pattern. Pin on the warp or straight first, and the rest of the pattern will be on the right grain of goods. Stick pins in horizontally, to keep from puckering, following the width.

Trace around edges of each gore and allow when cutting out,, ¼ inch at top and bottom of draft, and ¾ inch on side seams. Cut small notches on hip lines, outside the traced line, as indicated on paper pattern.

Test carefully all measurements—waist, hips, back and lengths. When thru with paper pattern, fold, with all the straight edges together in order of draft.

To join skirt together, start on right side with front gore. Match at hip, waist and bottom traced lines, pinning at these places first so as not to stretch the bias side of gore beyond the straight sides. Baste on traced or fitting line, holding bias edge on top. Join each side gore to either side of front in the same manner, and the back gores to each side gore, with the two bias edges on center back. Try on and alter if necessary. Stitch as for French seams, first, ⅜ inch out from the traced line, and second, stitching on this line.

To make lap for placket, take a straight piece of goods twice its depth as for the drawers, joining first on right side with straight strip underneath, fold over right side, making one inch wide when finished (model 2½ inches wide which allows for seams.) Gather back gores at waist

line within one inch of side back seams, and right side, turning lap or fly underneath.

Cut waist belt 1 inch larger than the waist measurement (the inch is for lap), by 2 inches, allowing ½ inch on each end for seams, and ¼ inch on each long edge. Always cut a belt length on warp of material, otherwise it will stretch. Turn under raw edges, find center, not counting the extra inch for lap to be extended on left side, and cut small notch. Also notch the middle of front gore at waist, and join to under side of belt at center front, with traced line of skirt on folded edge of belt. With all seams turned toward center back, ease into the band as much as possible without puckering, pinning first, then basting very closely. Fold over these edges, the opposite edge of band, baste and stitch one or two rows to keep in place. Cut horizontal buttonhole on right ½ inch from end, and sew button firmly on left end, so lap will not be seen.

If body of skirt is put on without easing, it will roll over the belt when garment is worn.

If more fulness is desired at bottom of skirt, increase width of each gore by starting 1/3 of its length below the waist line, on each bias side. For less fulness, decrease. The waist and hips

must never be smaller than the measurements taken, and the width around bottom should be in good proportion to the height and the size of hips of each individual, even when extreme fashions are in vogue.

DUST RUFFLE

Cut or tear as many warp strips of cloth as will measure once and a half the width it is to join, making each strip 4 inches wide when finished. Cut 5 inches to allow for hem. Join all the ends, making French seams when two selvages do not come together. Use quarter-inch machine hemmer, and gatherer attachment, dividing ruffle by notches in halves and quarters before gathering. Divide the bottom of skirt in same manner, and join, matching notches, with no seam at center front, but the middle of one of the strips. Pin, with the two raw edges on right side, holding ruffle on top. Baste and stitch ¼ inch from edge, turn on wrong side, fold cloth the depth of seam, basting and stitching on edge of gathers to hide first stitching. Turn this seam up toward waist, baste flat, and stitch on right side on upper edge.

FLOUNCE

Cut flounce like dust ruffle, making 12 inches deep or more. Join, hem and gather, matching pattern if embroidery is used. Tuck when goods is alike. Pin flounce to body of skirt even with the dust ruffle. If scalloped embroidery is used, have longest point even with bottom of dust ruffle. Use board when mounting, and see that top line of flounce is straight. Baste well, and cover raw edges with bias binding or finishing braid. Stitch on either outside edge.

For loop or hanger, double-fold a straight strip of goods ¼ inch wide when finished and 2½ inches long. Pin center of loop to lower edge of center front of belt, and fasten securely on either end, turning under raw edges. A piece of tape may be used instead.

Finish and cut all thread ends, pull bastings, and press well on right side over skirt board, dampening any portion that is wrinkled or creased.

Attach name and date finished.

DRAFTS

Shirt Waist

From the shirt waist draft are made the corset

cover, the chemise and the nightgown in their order of progress. The shirt waist is given first, being the foundation for all of these, but is made after the nightgown when the sleeve draft has been explained.

SHIRT WAIST MEASUREMENTS, WITHOUT SLEEVE, FOR CORSET COVER DRAFT

Neck—Place tape measure closely around base of neck. (Model 13 inches.)

Depth of Front Armseye, Armsize or Armhole—Place tape measure or string under the arms, fastening securely at side above bust line, making a straight line across the front and back. Place another tape line in center of front at base of neck, and measure down to meet the other tape measure or string. (Model 5 inches.)

Length of Front—Place tape measure at base of neck, at center front, and measure down straight, to bottom of waist line, where a belt or tape has been firmly drawn. Take easy measure. (Model 15 inches.)

Width of Front Between Shoulders—Place tape measure across front, from ends of shoulder

blades, in straight line with base of neck. (Model 14½ inches.)

Length of Shoulder—Place tape measure at base of neck at side, and measure to end of shoulder blade. (Model 5½ inches.)

Bust—Place tape measure around the fullest part of bust. Easy measure. (Model 36 inches.)

Width of Back Between Shoulders—Place tape measure across back from end of shoulder blades, in straight line with base of neck. (Model 14½ inches.)

Underarm—Place tape measure at underarm pit, and measure down in straight line to bottom of waist line. (Model 8 inches.)

Depth of Shoulder (Back)—Place tape measure at base of neck at center back, to meet another tape measure which must be stretched across the back at top of shoulders. (Model 1½ inches.)

Depth of Armseye (Back)—Place tape measure at center of back neck, and measure down to meet the tape measure or string placed under the arms. (Model 7 inches.)

Length of Back—Place tape measure at center back, from base of neck to bottom of waist line. (Model 14½ inches.)

Waist—Place tape measure around smallest part of waist. (Model 24 inches.)

Hips—Place tape measure 5 inches below waist line (6 inches when measuring skirts), and measure easily around hips. (Model 34 inches.)

For Corset Cover, Chemise, Nightgown, and Shirtwaist, with the Sleeve for the last two, take this same draft as a basis.

Material for corset cover, 1½ yards cloth, 36 inches wide.

Long cloth, muslin, dimity, cross bar, etc.

SHIRTWAIST DRAFT FOR CORSET COVER

Front—Take ½ sheet of drafting paper.

Fold under 3 inches on longer side, before drafting, which is for front box pleat and fulness and is not included in draft.

Construct half a rectangle, with fold at left. Use this for the vertical line, and the top edge of paper for horizontal line.

Mark upper left corner A.

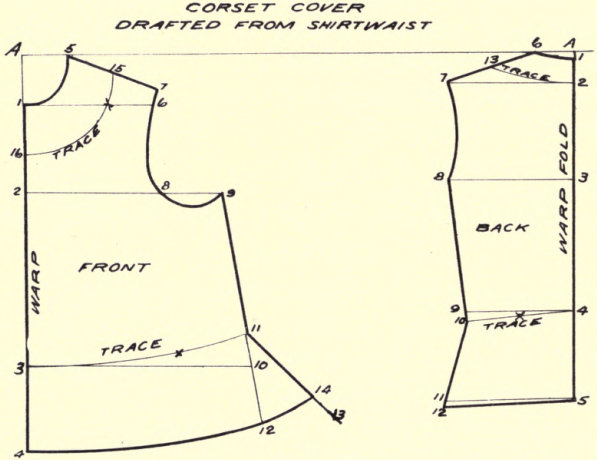
Dot 1 is 1/5 the neck measurement plus ¼ inch down from A.

Dot 2 is depth of armseye measurement down from Dot 1.

Dot 3 is length of front measurement down from Dot 1.

Dot 4 is 5 inches below Dot 3.

Dot 5 is 2½ inches to right of A.



Connect 5 and 1 with downward curve (about ¼ of circle).

Dot 6 is a horizontal line to right of Dot 1, ½ the width of front.

Dot 7 in 1 inch above Dot 6.

Connect 5 and 7, the correct shoulder length

from Dot 5, which usually extends beyond Dot 7, and should be used for the connecting point.

Dot 8 is a horizontal line to right of Dot 2, ½ the width of front.

Dot 9 is extension of line 2 and 8, to equal the difference between bust and width of back measurements, divided by 2, plus ¾ inch. This ¾ inch is added to make the underarm seam nearer the back, thus giving a better shaped back.

Connect 7, 6, 8 and 9 as illustrated—7, 6 and 8 with left curve, 8 and 9 with downward curve going below line and rounding Dot 8.

Dot 10 is a horiontal line to right of Dot 3, same length as line 2 and 9, plus 1½ inches.

Connect 9 and 10.

Dot 11 is correct underarm measurement on this line, down from Dot 9.

Dot 12 is extension of last line, 5 inches below Dot 11.

Dot 13 is 4 inches to right of Dot 12.

Connect 11 and 13.

Dot 14 is 5 inches below Dot 11 on line 11 and 13.

Connect 3 and 11 with slight downward curve. This is the waist line to be traced.

To left of Dot 11 on waist line, measure 1/3 its

distance and make cross. This indicates the extent of gathering on fronts.

Connect 4 and 14 with parallel curve of 3 and 11.

Dot 15 is ½ of shoulder length between Dots 5 and 7.

Dot 16 is length of line 5 and 15 down from Dot 1.

Connect 15 and 16 with parallel curve of 5 and 1 and trace.

Make cross where this curve intersects line 1 and 6, to indicate extent of gathers at neck. Test all the measurements, then cut pattern on heavy lines as illustrated, with no allowance for seams. Write "warp" on line 1 and 4. Also "front" and pupil's name.

BACK

Use remainder of paper from front draft for back pattern.

Let longer edge represent the vertical line, which is at the right when drafting. Let top of paper represent the horizontal line extending to left.

Mark right corner A.

Dot 1 is ¼ inch down from A.

Dot 2 is depth of shoulder (back) down from Dot 1.

Dot 3 is depth of armseye (back) down from Dot 1.

Dot 4 is length of back down from Dot 1.

Dot 5 is 5 inches below Dot 4.

Dot 6 is 1/6 the neck measurement minus 1/6 inch to left of A.

Connect 1 and 6.

Dot 7 is a horizontal line to left of Dot 2, ½ the width of back.

Connect 6 and 7 the correct shoulder length from Dot 6.

Dot 8 is a horizontal line to left of Dot 3, ½ the width of back.

Connect 7 and 8 with curve to right.

Dot 9 is a horizontal line to left of Dot 4, ¼ the waist measurement.

Connect 8 and 9, the underarm measurement down from Dot 8, which extends usually below Dot 9.

Dot 10 is this extension. Connect 10 and 4 and trace. Make cross in middle of line, for gathers.

Dot 11 is horizontal line to left of Dot 5, the

same length as line 7 and 2, or ½ the width of back.

Connect 10 and 11.

Dot 12 is 5 inches below Dot 10 on this line.

Connect 12 and 5, straight line.

Dot 13 is ½ of line 6 and 7.

Connect 13 and 2, with downward curve.

On line 1 and 5 write "lengthwise fold." Also "back," and pupil's name.

Test all measurements, then cut on heavy lines as illustrated, with no allowance for seams.

LAYING PATTERN ON THE CLOTH

Place back pattern on double thickness of cloth with lengthwise fold on center of back.

Place front pattern on double thickness of cloth, with right sides together, the center front on warp.

Pin along the warp first, and the rest of the pattern will be on the right grain of the material. Allow for ¾ inch hem on shoulder and underarm seams, and ¼ inch at neck, armsizes and bottom of pattern.

Trace center line 2 and 4 around edge of pattern, the waist lines with their crosses for gath-

ers, and lines 15 and 16 on front neck, and 2 and 13 on back neck.

Cut out cloth, join, pinning first, on traced or fitting lines, matching underarms at waist lines, and the shoulder seams.

Baste well on fitting line, try on, and alter if necessary.

Stitch outside trace lines, so the second stitching will come on tracing.

Make a ¾ inch box pleat on right front, and a ½-inch hem on left front.

Stitch box pleat ⅛ inch from each edge.

Gather at waist between crosses indicated, with two rows, the first on traced line, the second ½ inch below.

Cut straight strip of cloth, 4 inches larger than waist measurement (finished), and turned in on either long side to measure ½ inch wide finished. Cut 1 inch. Pin to waist line with center of belt at center back. Arrange fulness on back portion, with gathers toward center, to equal ⅜ of the belt strip, between underarm seams.

Each side of the front is divided between the remaining ⅝, with gathers toward the front.

Stitch on edges and insert tape.

Turn ¼-inch hem on bottom of corset cover.

Finish armsizes with bias binding or facing ½ inch wide. Join on underarm seam.

If beading is used for neck, use narrow machine hemmer and sew on beading at same time, or bind first, like armsizes, and add lace edge to these. The fulness for lace edge on armsize should equal once and a half the distance, with the same allowance at neck or if edge is over ¾ inch wide, sew on at neck without gathers.

Make four buttonholes on the box pleat, the first just below the neck binding, cutting vertically and spacing evenly to waist line. Make fan ends.

Very small pearl buttons are used on corset covers. Pull out all baste threads, fasten or cut all loose ends, then press on wrong side, dampening if necessary. Attach name and date.

CHEMISE ON SHIRTWAIST DRAFT MEASUREMENTS

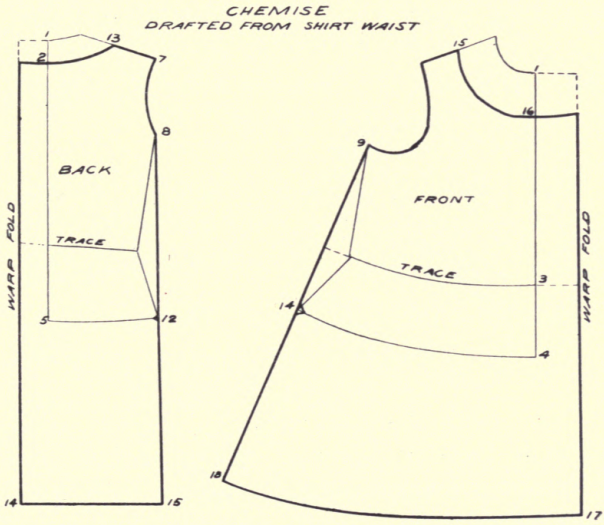
Length of back:

Measure from center base of back neck to bend of knee. (Model 33 inches not including 5 inch ruffle.)

Length of front:

Measure from center base of front neck to knee. (Model 31 inches not including 5-inch ruffle.)

Material 3 yards 36 inches wide. Lansdale, long cloth, dimity, crossbar, etc. are suitable.



This draft may be worked out on paper first, or directly on the material to be used, with shirt-waist or corset cover draft as the foundation. As

this model is given to allow the garment to slip over the head instead of opening in the front, the center back and front are laid on lengthwise folds. If open in front, follow directions for nightgown, *i. e.*, the next draft.

The back pattern is used first, in order to obtain the underarm measurement. Two inches to right of a warp or lengthwise fold, place line 2 and 5 of back pattern. More allowance for fullness may be added. Measure down from Dot 1, for length of back, and not Dot 2.

Dot 14 is this point.

With yardstick on Dots 8 and 12, draw or trace a line that will meet a horizontal line drawn at right angles with center back line, as illustrated.

Dot 15 is this connection. The distance between Dots 8 and 15 is the length of underarm, and the traced line is the sewing line.

Trace waist line and, when cutting out, make notch on Dot 12. Allow ¾ inch on shoulder and underarm for seams, and ¼ inch at neck, armsizes and bottom.

The front pattern of corset cover is laid with Dots 1 and 4, three inches to left of a warp or lengthwise fold, directly on the material to be

used, or paper. More allowance for fulness may be added.

Measure down from Dot 1, and not Dot 2, the length of front measurement, and **Dot 17.**

The underarm measurement is the same length as line 8 and 15 on back draft and is found by placing yardstick on Dots 9 and 14, drawing or tracing a straight line down from Dot 9 to equal this measurement.

Dot 18 is this point. Connect 17 and 18 with a slight downward curve.

Trace front pattern as illustrated on heavy lines. Trace waist line, and cut notch on Dot 14. Cut, leaving ¾ inch on shoulder and underarm seams, and ¼ inch on neck, armsizes and bottom of chemise. Pin shoulder and underarm seams together, matching the latter at notches on right side.

Baste right side on sewing line, try on, and alter if necessary. Make French seams, turning them toward the back when finished. Bind the armsizes and neck as on corset cover, and finish the bottom of chemise with a ruffle, put on in the same manner as dust ruffle on the 5-gored underskirt, allowing 5 inches for ruffle when finished. A wide hamburg or embroidered beading may be

stitched flat on the waist line (do not use lace, because it is not strong), making center of beading come on traced line, and stitching on either edge. Join on underarm. The width of the chemise at top, if it slips over the head, must equal the hip measurement, in order to be taken off easily. Fasten and cut all loose threads and finish off ends neatly. Press and fold with underarm seams together.

Attach name and date.

NIGHTGOWN ON SHIRTWAIST DRAFT

Measurements

Length of Back:

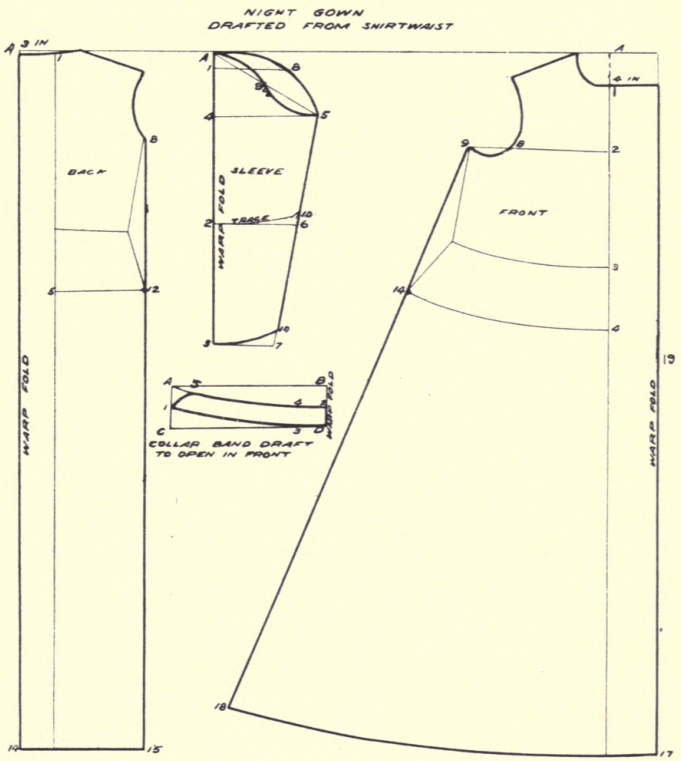
Measure from center base of back neck to floor. (Model 58 inches.)

Length of Front:

Measure from center base of front neck to floor. (Model 56 inches.) Material, 5 yards of cloth 36 inches wide.

Fruit of the Loom, Pride of the West, flannelette, crepe, etc., are suitable.

This draft, like the chemise draft, may be worked out on paper first, or directly on the material to be used, with the shirt waist or corset cover draft as the foundation.



The center back and front are laid on lengthwise folds, altho the gown opens at center front.

Commence with **back** pattern of corset cover, with line 1 and 5, 3 inches to right of a lengthwise fold. This fulness may be taken in with tucks extending to waist line in order to fit collar band. Measure down from Dot 1 the length to floor and mark **Dot 14.**

With a yardstick on Dots 8 and 12, draw or trace a line that will meet a horizontal line drawn at right angles with center back as illustrated.

Dot 15 is this connection.

Make notch on Dot 12. Allow same amount on seams as on chemise when cutting.

The **front** pattern of shirtwaist or corset cover is laid with line 1 and 4, four inches to left of a lengthwise fold, measuring down from Dot 1 the length to floor. Mark **Dot 17.**

The **underarm** measurement is the same length as line 8 and 15 on back draft, and is found by placing yardstick on Dots 9 and 14, drawing or tracing a straight line to equal this measurement down from Dot 9.

Dot 18 is this point.

Connect 17 and 18 with a slight downward curve. This front pattern will necessitate piecing, the joins being made an equal distance from either side of center front. The fulness at

neck may be tucked to fit the neckband, extending tucks not below depth of armseye measurement, and slanting upwards toward shoulder.

Two inches below hip measurement on center front, make **Dot 18.**

The center of front is torn or slit from neck to this point.

Make notch at Dot 14, after cutting and allowing for seams as on front pattern of chemise. Cut a small notch also on Dot 8, to indicate where the sleeve joins body of gown.

Match the underarm seams at hip line, also shoulder seams, pinning on right side on traced lines before basting. Make French seams, turning toward center back when finished.

On the right side of placket, a ¾-inch box pleat is put on, extending two inches below tear and forming a point at the lower end. The center of box pleat should come directly over the seam, half of it lapping to left side. The left front has also a straight piece attached, to form a lap ¾ inch wide when finished. Cut 1¼ inches. Finish box-pleat with buttonholes as in the corset cover.

Turn an inch hem at bottom of gown.

COLLAR BAND DRAFT

To Open in Front

Measurements:

Base of Neck—Measure around base of neck, close measure. (Model 13 inches.)

Top of Neck—Measure around top of neck, close measure. (Model 12 inches.)

Draft—Construct rectangle, ½ the neck measurement (base), plus ½ the width of box-pleat on right side of front for horizontal lines, by 1 inch (or any height desired) plus ¾ inch for vertical lines.

Place left side on woof fold for bands and on warp fold for high collars. Mark rectangle A, B, C, D, as illustrated.

Dot 1 is the height of band or collar down from A.

Dot 2 is the height of band or collar up from D.

Dot 3 is 1 inch to left of D.

Dot 4 is 1 inch to left of Dot 2.

Connect 1 and 3 with a slight downward curve.

Connect A, 4 and 2 with a parallel curve.

Dot 5 is ½ the top neck measurement plus ½ the box pleat on line A, 4 and 2, to left of Dot 2.

Connect 1 and 5 with curve to left, rounding Dot 5.

Cut out pattern on lines 2, 4, 5, 1, 3 and D as illustrated. 2 and D are laid on the woof of the goods for narrow neck band, to prevent stretching.

Open pattern and lay on two thicknesses of cloth, pinning securely. Trace all around edges, then cut, allowing for seams on all sides (⅜ inch).

Stitch on top and sides on traced line and turn up raw edge at bottom. Turn inside out and baste top edge. Fit neck of gown to underneath piece of collar band, easing it into the band, basting very closely. Bring upper part of band over this, baste and stitch on all edges.

SLEEVE FOR NIGHT-GOWN OR SHIRT-WAIST

Measurements

1—Armseye, Armsize, or Armhole:

Measure smoothly around top of arm over the shoulder (Model 15 inches).

2—Shoulder to Elbow:

Bend elbow tightly with arm even with

shoulder. Measure from top of shoulder to elbow point (Model 14 inches).

3—Elbow to Hand:

Measure from elbow point to just below wrist knuckle. (Model 10 inches).

4—Around Elbow:

Bend elbow to obtain fullest measure around the elbow. (Model 12 inches).

5—Around Wrist:

Measure over the wrist knuckle-bone. (Model 6 inches).

6—Around Hand:

Measure around fullest part of hand, with fingers out-stretched and thumb in (Model 8 inches).

7—Inside Seam to Elbow:

Measure from the pit of arm to bend of elbow (Model 9 inches).

8—Inside Seam to Hand:

Measure from pit of arm to the hand, below the knuckle (Model 18 inches).

SLEEVE DRAFT

Take half sheet of drafting paper, fold on length, so the dimensions equal about 26 by 12

inches. Have fold at left side while drafting. Mark top at left corner A.

Dot 1 is 1 inch below A. (This point regulates the fulness), which may be increased or decreased, according to prevailing style.

Dot 2 is shoulder to elbow measurement down from Dot 1.

Dot 3 is elbow to hand measurement down from Dot 2.

Dot 4 is inside seam to elbow measurement up from Dot 2.

Dot 5 is a horizontal line to right of Dot 4, ½ the armseye measurement plus ½ inch or as many more as desired for fuller sleeve, which is subject to change according to fashion, but never less than half the armseye measurement.

Dot 6 is a horizontal line to right of Dot 2, ½ the elbow measurement plus ½ inch or more if more fulness is desired, but never less than half the elbow measurement.

Dot 7 is a horizontal line to right of Dot 3, ½ the wrist measurement plus ½ inch, or ½ the hand measurement if more fulness is desired. Do not measure less than half the wrist.

Connect 5, 6 and 7.

Dot 8 is a horizontal line to right of Dot 1,

1/3 the armseye measurement or more if puff is desired. The longer the line, the more fulness at top of sleeve, but the proportion should be governed by line 1 and A to make a good curve.

Connect A, 8 and 5, with upward curve.

Connect A and 5 with straight line, divide in halves and **Dot 9.**

Connect A and 9 with an upward curve, and 9 and 5 with downward curve as illustrated.

Measure on line 5 and 7, the inside seam to elbow measurement down from Dot 5.

Dot 10 is this point.

Measure on line 5 and 7, the inside seam to hand measurement down from Dot 5.

Dot 11 is this point.

Connect 2 and 10 with slight downward curve.

Connect 3 and 11 with slight downward curve.

Make one notch on Dot 10, two notches on Dot 9 for back of sleeve, and one notch one inch above Dot 5 for front. These last two notches indicate space to be gathered. One inch to right of A, make a notch showing where the sleeve joins the shoulder seam of gown.

Cut pattern with lines 1, 8 and 5 on the double, as also 5, 6, 10 and 3, then unfold and cut ½ the pattern at top, on line A, 9

and 5, as illustrated. Lay open pattern on double thickness of cloth, with either right or wrong sides facing each other, and line A and 3 on warp thread.

Trace around edges, allowing ¼ inch at top and bottom of sleeves and ¾ inch on seams when cutting.

Cut small notches as indicated on paper pattern. Match seams at elbow, pinning and basting on right side for French seams. See that both sleeves are not for the same arm before stitching. Line A, 8 and 5 faces front. Reverse seam on one sleeve if mistake is made.

Gather tops of each between notches 8 and 9, with 2 rows, ¼ inch apart—the first on traced line, the second below. Gather around the bottom of sleeves.

Pin seam of sleeve to notch made on front body of gown on depth of armseye measurement (Dot 8), easing as much as possible to gown on the underarm part. Match notch at top of sleeve to shoulder seam. Do not make French seams, but stitch on wrong side and bind.

To give proper amount of ease to sleeve on underarm, turn on wrong side with sleeve portion on top, rolling both edges over first finger of

left hand where sleeve has no gathers. Baste very closely before stitching and binding. See that sleeve seams turn toward underarm, and all other seams toward the back.

Cut bias binding 1 inch wide and hold on underside when stitching, making join on underarm seam.

Turn remaining edge of binding over these raw edges, covering seam and hemming by hand or stitching on edge. Always place gathered side on top when stitching, to avoid wrong grouping of gathers.

Finish bottom of sleeve with straight band, cut 1 inch wide on double (allowing for seams) and large enough to slip over hand easily.

Join each band before attaching to sleeve, then sew on, as before explained. Have gathers fullest where the strain of elbow comes. To stitch band on right side, turn sleeve wrong side out and stitch with right side nearest presser foot. Have band seam and underseam match. A lace edge may be added to bottom of band, or if embroidery is used, slit the lower edge and insert. Sew on hanger at back neck.

Finish all edges neatly, cut loose threads, take

out bastes, and press on skirt board. Use damp sponge or cloth to take out wrinkles.

Attach name and date.

SHIRT WAIST

(Plain Tailored)

Material, 2½ yards, 36 inches wide.

(Linen, cheviot, madras, lawn, gingham, etc.)

Measurements:

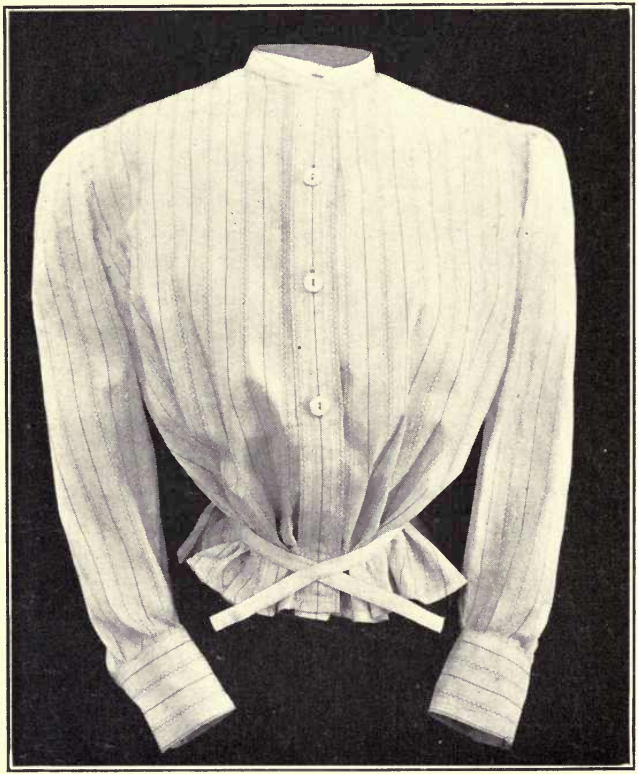
Use shirt waist or corset cover draft on page 90, for body of shirt waist, and sleeve measurements under night gown draft on page 101.

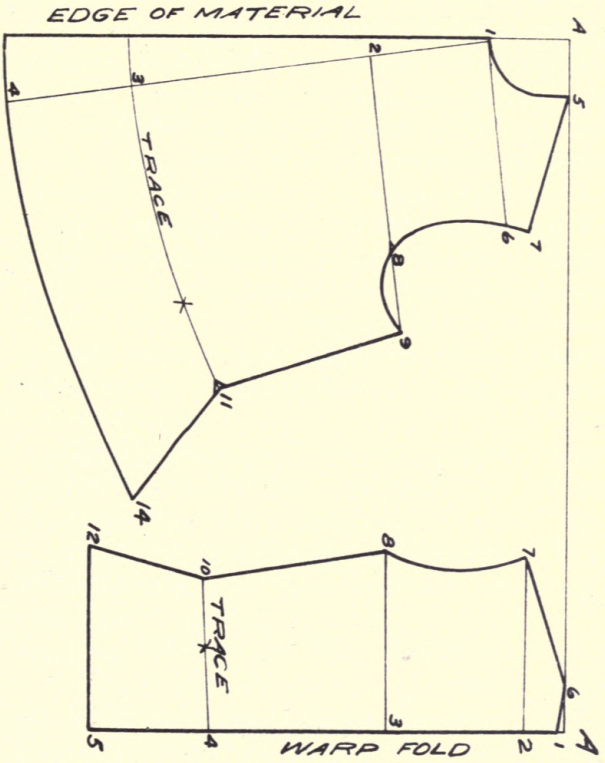
This shirt waist opens in front.

Before laying **front** pattern on material, baste a box pleat 1 inch or more on right edge of cloth, the length between Dots 1 and 4.

Baste a ½-inch hem the same length on opposite front.

If goods is striped or plaided, let the width of box pleat be governed accordingly, so corresponding sides will look alike. Pin the two fronts together (with either right or wrong sides facing each other), place the front paper pattern with Dot 1 in center of box pleat at neck, and Dot 3, 2 inches to right of center pleat at waist.




EDGE OF MATERIAL
TRACE
TRACE
WARP FOLD
SHIRT WAIST

More than 2 inches may be allowed if the material is very sheer.

Trace around edge of pattern, except front line. Notch on Dot 8, trace waist line, marking cross for gathers, and cut, allowing ¼ inch on neck and armsizes, and ¾ inch on shoulder, underarm seams and bottom of waist.

Place **back** paper pattern with Dots 1 and 5 on a lengthwise fold. Trace around edges, waist line, and cut, allowing ¼ inch on neck and armsizes, and ¾ inch on shoulder, underarm and bottom of waist.

Match underarm seams at waist line, and on shoulders, pinning, then basting, on traced or fitting lines.

Try on before stitching, and alter if necessary. Stitch as on other garments. On either side of waist line, half way between the underarm and center of back, make a mark to signify space to be gathered. Gather twice, ½ inch apart the first row on traced line, the second, below it, and pull up, to equal ⅜ the waist measurement between underarm seams.

These gathers are held in place by a belt or piece of tape ¾ inch wide and 4 inches longer than the waist measurement (finished), and fast-

ened over the back gathers at top and bottom of belt.

The fronts of shirtwaist may be gathered also between the notches, but, if made from washable material, it is easier laundered if left plain. Laying the fulness in straight pleats is a better mode of arranging fronts than in gathers, and should be fitted on the pupil.

Use **collar band**, drafted for night gown, and attach in same manner, cutting shorter on fronts if a smaller neck or box pleat has been allowed. Work small horizontal buttonhole on center back of neck band, and one on either end of front, far enough from edge to equal the neck measurement when fastened.

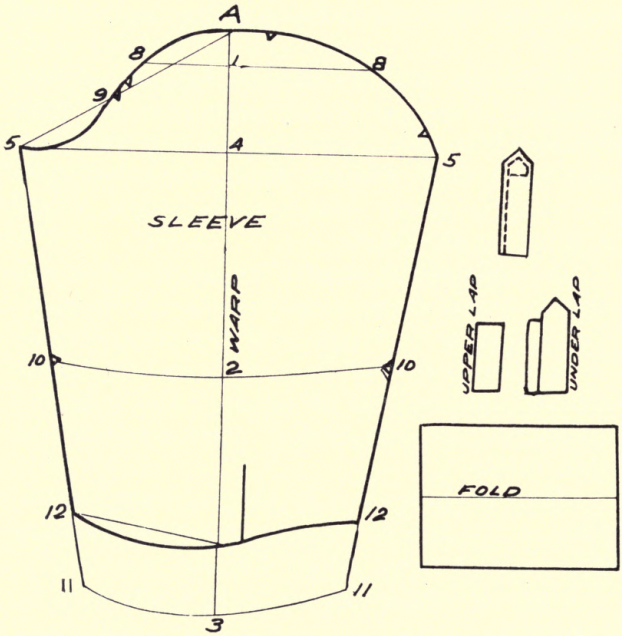
Make 3 large or 4 smaller vertical buttonholes on the box pleat, spacing evenly, between the neck and waist. Work bar ends.

Finish around bottom of shirt waist, with ½-inch hem.

SHIRT WAIST SLEEVE

Use sleeve draft of nightgown, allowing more fulness if desired on Dots 1, 5, 6, and 7, as explained in draft.

A cuff 3 inches deep has been allowed on



draft. A wider or narrower cuff may be used by deducting the desired depth from the full length sleeve.

Three inches above Dot 11, and Dot 3, mark Dots 12 and 13 as illustrated, connect them with a slight downward curve on top or upper side of

draft, and a slight upward curve on under side. Cut pattern or cloth on these lines.

One inch from center of sleeve, on under side, make a warp cut, 3 inches long. This is the placket, which has an under and over-lap attached. For under side, cut a warp strip 3 inches long, and 1 inch wide (allow for seams) to make a ½-inch finished lap when folded, and sew as on preceding plackets.

For upper or opposite edge, cut an over-lap like illustration, 3 inches on short side, and 4 inches to point. Allow ¼ inch for seams on all edges. Fold over on right side to cover short lap, and turn under raw edges. Stitch as illustrated, letting stitching below point on over-lap, catch the top edge of under-lap.

Join sleeves on right side, matching notches at elbow, for French seams.

Cuff: The length of cuff should equal the hand measurement.

Cut paper pattern the hand measurement by twice the depth of cuff desired, to avoid seams, or two pieces, the correct depth.

Line with crinoline, Indian head or heavy cotton cloth, cut on warp, and basted to the outside, before folding.

Fold lengthwise on wrong side with interlining over fold, and stitch short ends, making round or square corners.

Turn in raw edges to make cuff 3 inches deep, turn right side out, pulling out corners smoothly. Baste ends and folded edge.

Fit bottom of sleeve to under edge of cuff, with no gathers on either side of sleeve seam.

Pin and baste closely, then fold top part of cuff over raw edges.

Baste and stitch twice all around the edges, the width of the presser-foot apart.

If buttons are used on cuffs, sew on under side near edge of stitching, cutting buttonhole with the length of cuff. Work fan end on outside, and bar end on opposite end.

A very small button and buttonhole are sewed on the under and over-lap to hold cuff closely.

To break the severity of the plain front, a square or round **pocket** may be stitched on left side.

Bind top edge with bias strip, or fold over to any shape desired, and turn under raw edges before attaching.

Baste in place, making top edge even with depth of armseye, and in center of space.

Press shirt waist, sleeves first, then back, and the fronts last.

Use starched water for dampening.

Attach name and date of pupil to finished article.

PLAIN FIVE-GORED DRESS SKIRT WITH HABIT OR PLEATED BACK

Material: Khaki, linen, gingham, etc.

Use drafted pattern of the 5-gored underskirt, omitting line 5, 11 and 8 on the back gore. For habit or plain back, trace line 4, 6 and 7 on the cloth, Dot 11 on pattern being 10½ inches down from Dot 4 on the habit back line. Connect A, 10 and 7 with slight, downward curve. Use dress skirt lengths, with no deduction for flounce or ruffle.

To make inverted pleat on center back, fold under on habit back line, 5 inches beyond waist line, (Dot 4), and 7 inches at the bottom beyond Dot 7. Bring edge of habit fold to meet a straight line connecting these new points. More or less allowance may be left for pleat if wider or narrower is preferred. Allow when cutting out on cloth ¾ inch for seams, and ¼ inch at waist and bottom of skirt. Stitch inverted pleat twice on each side to a point 8 inches below waist.

Finish placket as on underskirt, and have belt ⅝ inch wide when finished, instead of 1 inch as used on underclothes.

Allow 3 inches for hem at bottom of skirt.

Sew No. 4 hook on right end of belt, ¼ inch in, and the round eye, which is stronger than the straight, on left end, far enough from edge to hide the underlap. Use No. 2 hump hooks and eyes for placket, placing hooks ¼ inch from edge, and 1¼ inches apart. Use straight eyes on placket. Sew hooks on first and match space for eyes with pins or pencil dots. An unevenly matched placket can spoil an otherwise perfect skirt, so great care should be taken on this part.

Two small hangers are sewed on lower edge of belt. To find their positions, match middle of back to middle of front, and put a pin where each side of fold comes. This is the center of loop. Fasten ends securely.

Finish all ends and threads. Place on skirt board, with top of skirt at smaller end, and press well on the right side. Do not bear too heavily on seams or they will shine, in such case, press on wrong side.

Attach name and date and hang up by loops.

KILTED OR PLEATED SKIRT

Material: 5 yards, 36 inches wide. Width around bottom 4 yards.

Measurements taken the same as for preceding skirt, but no turning line is given for the bottom of skirt, because the pleats are laid on the straight and the strips of cloth all cut the same length taking the longest side measurement.

Determine width around bottom, then join together as many breadths of material as will equal this amount. If plaided or striped, match exactly.

Have center of front the center of a breadth of cloth, so seams will be evenly spaced. Make box pleat on center front by turning a certain depth pleat or fold toward the back on either side of center. The width of pleat is determined by the amount of space left between each pleat, and the depth of each. All spacing must be done on the hip line at least 6 inches below waist, and afterwards fitted evenly into the waist measurement. A deeper pleat is generally made on either side of center back, narrower at waist line than at bottom, which brings the back seam on the bias.

Space pleats evenly with tape measure and

mark with pins. Do not join back seams until all pleats have been made and basted, keeping the skirt flat on a table or board.

Stitch after fitting, near edge of each pleat and the same number of inches down from the waist line, which should always be below fullest part of hip. Mount belt as on other skirts, sew on hooks and eyes, and turn up bottom for hem, with skirt marker.

Press each pleat sharply on right and wrong sides, make two loops and hang up garment after attaching name and date finished.

FANCY WAIST MADE FROM PLAIN SHIRTWAIST PATTERN, AND OPENING BEHIND

Material: 3 yards, 36 inches wide. Pongee, taffeta, swiss, muslin, etc.

A fancy waist can be best designed if opened at center back.

A front yoke should have no seam on center front, but cut from one piece or one front piece and 2 back portions.

Front

If waist is to be tucked, make tucks before lay-

ing paper pattern on cloth. Take a strip of material the length from top of shoulder to waist or hip line, *i. e.*, from Dot 5 to Dot 4, or Dot 3, and work from center front. Tucks should graduate from center of front to shoulders, those nearest shoulders, not stitched below depth of armseye.

After tucks are made, place line 1 and 4 of front pattern on center of fold as explained in preceding waists.

Trace design for insertion, lace, or any mode of ornamentation desired, which can be penciled on paper pattern first.

Back

Tuck back, with tucks running full length, or stitched to depth of back armseye measurement tucks facing center back.

Make box-pleat—on right side and lap on left to be fastened with button and buttonholes or hooks and eyes.

If insertion or design is desired on shoulders also, stitch shoulder seams first.

Finish waist line as in other shirt waists.

Sleeves

A design for sleeve should be made in the center of pattern. This makes center of sleeve,

or center of design, 1 inch to right of line A and 3 on paper pattern.

If sleeve extends to, or just below elbow, have design in center of space; or if insertion is set in, or tucks made, stitch with the woof threads, Tucked bands, cuffs or any mode of finishing may be followed for bottom of sleeves.

Neck

The neck band and collar complete the making of a waist, and should not be cut down until ready to finish, because of the tendency to fray and stretch out of shape. The depth of neck may be traced when placing paper pattern, making pointed, round, or Dutch.

A high collar may also be used without first attaching band, but should be fitted on the pupil, pinning in place.

Use following draft for high collar:

COLLAR DRAFT, TO FASTEN AT BACK

Measurements:

Base of Neck (Model 13 inches).

Top of Neck (Model 12 inches).

Height of Collar (Model 2½ inches).

Rectangle equals ½ the neck measurement

for horizontal lines by height of collar desired, plus one inch, for vertical lines.

Mark A, B, C, D as illustrated, with A and C on fold.

Dot 1 is the desired height of collar up from C.

Dot 2 is 1 inch above D.

Connect 1 and B, and C and 2 with parallel downward curves.

Dot 3 is ½ the top neck measurement on line 1 and B, to right of Dot 1. Connect 3 and 2.

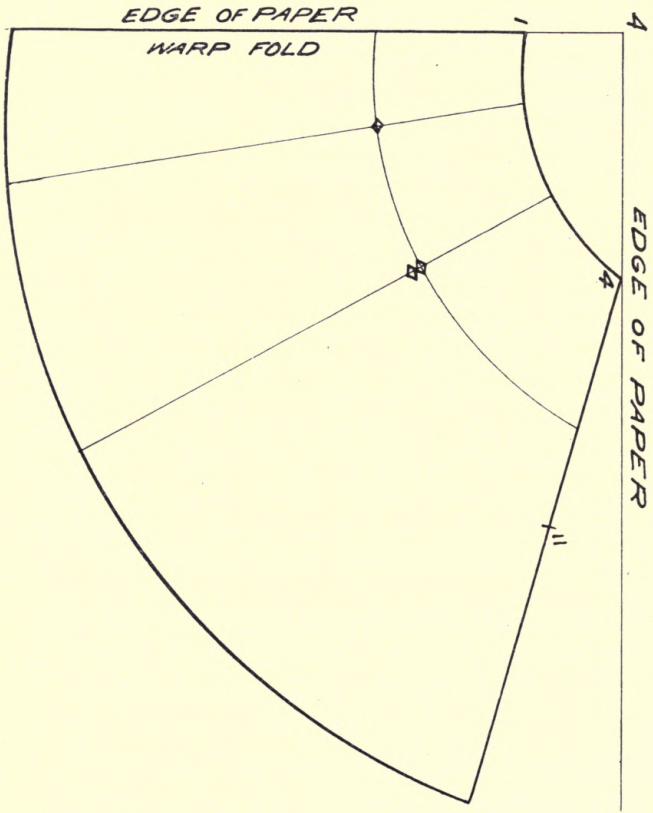
Cut out pattern on lines C, 2, 3 and 1.

When cutting on the cloth the center of the front may be on the warp or woof fold, the former preferred. Have two thicknesses of cloth, besides an interlining. Stitch sides and top together on wrong side, turn, and baste edges. Turn in lower edges and stitch, unless to be fastened to body of waist, in which case proceed as with collar band found with the night gown draft.

CIRCULAR UNDERSKIRT DRAFTED FROM GORED UNDERSKIRT, WITH FLOUNCES, BUT NO DUST RUFFLE

Material 5½ yards, 36 inches wide.

Sateen, moreen, hyde-grade, etc.


EDGE OF PAPER
WARP FOLD
1
4
EDGE OF PAPER
4
11

Use same measurements as for 5-gored underskirt, deducting 15 inches for flounce above dress length.

Take full size sheet drafting paper, and on this, place all the gores of the 5-gored underskirt pattern, found on page 77.

Match each gore according to notches, with front gore at lower edge of paper. Bring edges of paper together, without lapping for seams.

Let Dot 4 on center back gore touch line made at right angles to center front line, as illustrated.

An extra piece of paper will have to be pasted on back portion to complete pattern.

Curve the waist line more and test both waist and hips before cutting.

The more curved the waist line, the less need for darts on the side hip, and a round yoke may be traced off from this draft.

In placing pattern on cloth, trace all around the outside edge of draft, measure up from the bottom of pattern 15 inches, or as many as desired for a flounce and trace this on cloth. Cut, allowing for seams all around except on center front, which should be a lengthwise fold. Piece the cloth on either side, the join coming on center back seam and extending toward the sides.

Another way of making skirt with a front gore on same model:

Cut front gore separately as for 5-gored skirt pattern, keeping side and back gores together as the preceding circular gores were drafted. Lay goods, so warp will be on front of side gore. This draft prevents piecing if the goods is wide enough or fashion does not call for too wide a skirt.

The width of skirt at lower edge may be made narrower by taking off as many inches as desired on center of back gore, starting to decrease, from 1/3 the length below waist line.

If more fulness is desired, allow on fold on center front or at the center of back gore.

The flounce is made up of bias ruffles stitched together and joined with narrow bias bands. For 3 bias ruffles, cut all the strips 5 inches wide. Do not measure on the selvage when a bias width is given as it equals nearly a third less. The ruffle for top should be gathered very little. Once and a half or less the distance around the bottom of skirt is sufficient; the second ruffle measuring once and a half the first ruffle, and the third, once and a half the second ruffle. Allow for seams. Join each strip with selvages together,

or with French seam where edge is not selvage. Halve and quarter in order to join evenly, with seams and raw edges on right side. The bias band (cut 1½ inches wide) to be finished ¾ inch, can be stitched on at the same time, holding the right side next to the fullest ruffle, and stitching all three edges together. Turn bias band over on to the upper ruffle to measure ¾ of an inch, and stitch close to outside edge. Make the complete flounce before joining to body of skirt. If there are gathers at waist line in the back, put on a ⅝-inch belt (finished) with lap on placket like the underskirt, and finish in same manner.

If habit back is made, finish placket as before explained, and turn under waist line on the tracing, finishing the wrong side with a bias band ½ inch wide, stitched on each edge. Use hooks and eyes for fastening. Make hangers, press and attach name and date.

FRENCH LINING

Measurements

Material 2½ yards for 36 bust.

Heavy cotton, silesia, percaline, etc.

All measurements should be taken without dress waist on.

Front

Neck:

Measure closely around base of neck (Model 13 inches).

Depth of Armseye:

Place a tape measure or string under the arms fastening securely at the side, above bust line, making a straight line across front and back. Place another tape line in center of front at base of neck, and measure down to where the other string or tape line crosses. (Model 5 inches.)

3. **Length of Front:**

Place tape line at base of neck at center front and measure down to center of front at lower edge of waist line where a belt or tape line has been placed. (Model 14 inches.)

4. **Length of Shoulder:**

Place tape line at base of neck at side, and measure to end of shoulder blade. (Model 5½ inches.)

5. **Width of Front between Shoulders:**

Place tape line across front from end of shoulder blades, in straight line with base of neck. (Model 14½ inches.)

6. **Bust:**

Place tape line around fullest part of bust. (Model 36 inches.)

7. **Under arm:**

Place tape line at under arm pit and measure down in straight line to bottom of waist line. (Model 8 inches.)

8. **Waist:**

Place tape line around smallest part of waist. (Model 24 inches.)

9. **Hips:**

Place tape line 5 inches below waist line. (Model 36 inches.)

10. **Height of Dart:**

Place tape line at fullest part of bust and measure down to bottom of waist. (Model 6 inches.)

Back

1. **Width of back between shoulders:**

Place tape line across back from end of shoulder blades in straight line with base of neck. (Model 14 inches.)

2. **Depth of Shoulder:**

Place tape line at base of neck at center back and measure down to where a tape line has been drawn across the back at top of shoulders. (Model 1½ inches.)

3. **Depth of Armseye:**

Place tape line at center of back, and measure down to tape or string that has been placed under the arms. (Model 7 inches.)

4. **Length of Back:**

Place tape line at center of back from base of neck down to bottom of waist line. (Model 14½ inches.)

Sleeve

The same measurements are taken as sleeve draft found under nightgown.

1. **Armseye, arm size, or armhole.** (Model 15 inches.)
2. **Shoulder to elbow.** (Model 14 inches.)
3. **Elbow to hand.** (Model 10 inches.)
4. **Around elbow.** (Model 12 inches.)
5. **Around wrist.** (Model 6 inches.)
6. **Around hand.** (Model 8 inches.)
7. **Inside seam to elbow.** (Model 9 inches.)
8. **Inside seam to hand.** (Model 18 inches.)

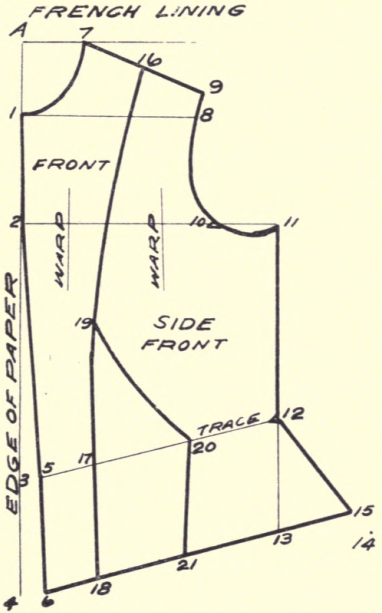
FRENCH LINING DRAFT

Front

Draw half a rectangle with vertical line about 25 inches long, and horizontal line to right, about 12 inches long. Mark corner A.

Dot 1 is 1/5 the whole neck measurement plus ¼ inch down from A.

Dot 2 is depth of armseye measurement down from Dot 1.



Dot 3 is length of front down from Dot 1.

Dot 4 is 5 inches below Dot 3.

Dot 5 is ¾ inch to right of Dot 3.

Dot 6 is ¾ inch to right of Dot 4.

Connect 1, 2, 5 and 6, which is the center front line.

Dot 7 is 2½ inches to right of A.

Connect 1 and 7 with downward curve about ¼ of a circle.

Dot 8 is a horizontal line to right of Dot 1, ½ the width of front.

Dot 9 is 1 inch above Dot 8.

Connect 7 and 9, the correct shoulder length from Dot 7.

Dot 10 is a horizontal line to right of Dot 2, same length as line 1 and 8, or ½ the width of front.

Dot 11 is extension on line 2 and 10, to equal bust measurement minus width of back, divided by 2.

Connect 9, 8, 10 and 11, rounding Dot 10 to right, and going below line from Dots 10 to 11.

Dot 12 is a vertical line down from Dot 11, at right angles with 2, 10 and 11, the correct under-arm measurement.

Dot 13 is extension of this last line 5 inches below Dot 12.

Dot 14 is 4 inches to right of Dot 13.

Connect 12 and 14, making it 5 inches long from Dot 12.

Dot 15 is this last point.

Connect 5 and 12, which is the waist line.

Connect 6 and 15 which is the hip line.

Dot 16 is half the shoulder length.

Dot 17 is 2½ inches to right of Dot 5.

Dot 18 is 2½ inches to right of Dot 6.

Connect 16 and 17 with a slight curve to left, and 17 and 18 with straight line.

Dot 19 is height of dart measurement up from Dot 17.

From Dot 5 to Dot 12 should equal just ¼ the whole waist measurement, after dart space is taken out, which is found by subtracting from this number of inches, 2½ inches (the distance between Dots 5 and 17), and measuring the balance to left of Dot 12.

Dot 20 is this point.

From Dot 6 to Dot 15 should equal ¼ the whole hip measurement after dart space is taken out, which is found by subtracting 2½ inches (the distance between Dots 6 and 18), and measuring the balance to left of Dot 15.

Dot 21 is this point.

Connect 19 and 20 with a slight curve to left, and 20 and 21 with straight line.

Make 3 short vertical lines or small circles one inch below the other, on front pattern and side front, running parallel with the center front line A and 4. These marks signify the warp of material when the pattern is laid on the cloth.

Before cutting out, test every part of pattern, according to measurements taken, then cut on heavy lines, as illustrated, 1, 2, 5, 6, 18, 17, 19, 16, and 7, which is the front portion, and on lines 19, 20 and 21 (rounding Dot 19) for the side front portion. Trace waist line on both pieces, making small notches at these points for matching. On Dot 10, make a small notch where the underarm seam of sleeve joins body of lining.

Back

Draw two sides of a rectangle about 10 inches by 22 inches, with corner to right, marking A.

Dot 1 is ¼ inch down from A.

Dot 2 is length of back measurement down from Dot 1.

Dot 3 is 5 inches below Dot 2.

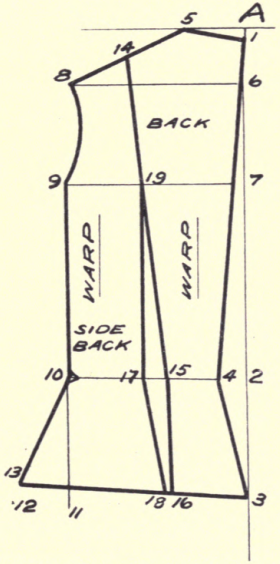
Dot 4 is 1 inch to left of Dot 2.

Connect 1, 4 and 3 with a straight line.

Dot 5 is 1/6 the whole neck measurement to left of A, minus 1/6 of an inch.

Connect 5 and 1 with straight line.

Dot 6 is depth of shoulder measurement down from Dot 1.



Dot 7 is depth of back armseye measurement down from Dot 1.

Dot 8 is a horizontal line to left of Dot 6, ½ the width of back.

Connect 5 and 8 the correct length of shoulder measurement from Dot 5.

Dot 9 is a horizontal line to left of Dot 7, ½ the width of back.

Connect 8 and 9 with a slight curve to right.

Dot 10 is a vertical line down from Dot 9, at right angles with line 7 and 9, the underarm measurement.

Dot 11 is extension of this line 9 and 10, five inches.

Dot 12 is 2½ inches to left of Dot 11.

Connect 4 and 10, which is the waist line.

Connect 10 and 12, making it 5 inches long from Dot 10.

Dot 13 is this point.

Connect 13 and 3, the hip line, with a slight downward curve.

Dot 14 is half the shoulder length on line 5 and 8.

Dot 15 is 1/3 of line 4 and 10, to left of Dot 4.

Dot 16 is 1/3 of line 13 and 3, to left of Dot 3.

From Dot 10 to Dot 4 should equal ¼ the whole waist measurement after dart space is taken out, which is found by subtracting the number of inches between Dots 4 and 15 from

¼ the waist measurement, and measuring the balance to right of Dot 10.

Dot 17 is the last point.

From Dot 13 to Dot 3 should equal ¼ the whole hip measurement after dart space is taken out, which is found by subtracting the number of inches between Dots 3 and 16, from ¼ the hip measurement, and measuring the balance to right of Dot 13.

Dot 18 is this last point.

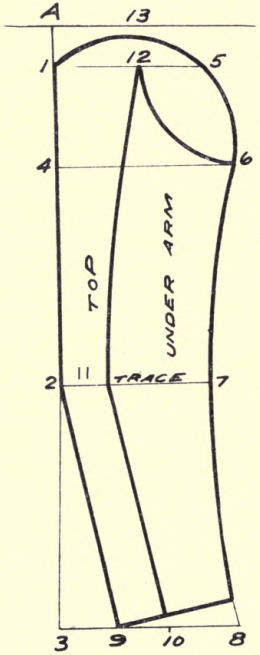
Connect 14, 15 and 16, and where this line crosses line 7 and 9, mark **Dot 19.**

Connect 19, 17 and 18.

Make 3 short vertical lines or small circles one inch below the other, on back pattern and side back piece, running parallel with the center back line of rectangle A and 3. These marks signify the warp of cloth as on front pieces. Before cutting out, test every part of pattern, according to measurements taken, then cut on heavy lines as illustrated: Dots 3, 4, 1, 5, 14, 19, 15 and 16 for center back; and Dots 18, 17, 19, 14, 8, 9, 10, 13 to 18 for side back. Trace waist line on both pieces, making small notches at these points for matching.

Sleeve

Take a half sheet of drafting paper, fold on length so the dimensions are about 26 by 12



inches. Have fold at left side while drafting. Mark top at left corner A.

Dot 1 is 1 inch below A.

Dot 2 is shoulder to elbow measurement down from Dot 1.

Dot 3 is elbow to hand measurement down from Dot 2.

Dot 4 is length of underarm to elbow measurement up from Dot 2.

Dot 5 is a horizontal line to right of Dot 1, ½ the armseye measurement minus 2 inches.

Dot 6 is a horizontal line to right of Dot 4, ½ the armseye measurement plus 1 inch.

Dot 7 is a horizontal line to right of Dot 2, ½ the elbow measurement plus 1 inch.

Dot 8 is a horizontal line to right of Dot 3, the same length as line 4 and 6.

Connect 6, 7 and 8 with a curve to left.

Measure on this line the correct underarm measurement from Dot 6, first to elbow and then to wrist, as the curve shortens distance and raises the points. Connect 2 and 7 for the elbow, and 3 and 8 for the hand.

Dot 9 is ½ the hand measurement plus 1 inch to left of Dot 8.

Dot 10 is the difference between the whole hand measurement and line 9 and 8, to left of Dot 8.

Dot 11 is the difference between the whole

elbow measurement and line 2 and 7, to left of Dot 7.

Dot 12 is 1/3 the armseye measurement to right of Dot 1.

Connect 1, 4, 2, and 9 with slight curve to left.

Connect 12, 11 and 10 with slight curve to left.

Connect 1, 5, and 6 with upward curve—the greater the curve the fuller the top of sleeve.

Before cutting out, test every part of pattern according to measurements taken, then trace thru on to under sheet of paper lines 6, 12, 11 and 10, cutting out on the double paper, on heavy lines as illustrated on lines 8, 7, 6, 5, 1, 4, 2, 9 and 8.

Notch at elbow and on Dots 2 and 7.

HOW TO PLACE LINING PATTERN ON CLOTH AND PUT TOGETHER

Front—Place front pattern on cloth according to warp as indicated by lines or circles, allowing 2 inches extra on front edge to be turned under and used as a facing for hooks and eyes. Trace all around edge of pattern, and, when cutting out, allow ¾ inch on shoulder, dart and lower edge of pattern. On neck, cut outside traced line. Trace waist line, and notch either side.

Side Front—Place side front in the same manner as front pattern, tracing waist line, notching either side, after cutting out. Allow ¾ inch for seams on shoulder, dart, underarm and lower edge of pattern. Around the armsize, cut outside the tracing.

Back—Place back pattern according to warp of goods, trace waist line, notch and cut out after tracing all around pattern, leaving ¾ inch for seams and lower edge. On neck, cut outside of tracing.

Side Back—Place side back according to warp of goods, trace all around pattern, also the waist line, and cut, allowing ¾ inch for seams and lower edge. Cut outside armseye tracing.

Sleeve—Place both sleeve portions with Dots 6 and 8 on a straight line. Trace each one all around edge of pattern and the elbow line, notching the latter. Cut just outside the trace lines at top of sleeve, and leave ¾ inch on all the other lines.

Joining—Match the back portions together at waist line, pinning, then basting with small, even baste stitches, on traced or sewing line. To either side of these match the side pieces, pinning at waist line first and basting each carefully.

Start at waist line and baste up, then from waist line down.

Put fronts and side fronts together, matching, pinning, then basting. Ease side fronts over the bust lines. Turn the 2 inches allowed on the center of front, on wrong side, and, before marking the spaces for the hooks and eyes, stitch twice on the machine near edge of cloth ¼ inch apart, to keep edge from stretching.

Starting on waist line, hold the two front edges on wrong side and make dots 1¼ inch apart above and below the waist. Join back and front portions together, matching notches. The sleeves are matched according to notches at elbow, care being taken not to make both sleeves for same arm.

Try on lining, making any alteration necessary before stitching on machine.

French seams may be made, except on shoulder and underarm seams, or, all the seams may be stitched on wrong side, cut evenly and not too close and notched. The shoulder and underarm seams are left open, and if bound, each is bound separately. All other seams are bound together, facing toward center back and front respectively or toward underarm seams.

Use No. 2 hooks and eyes, sewing hooks on right front and eyes on left.

Start at bottom of lining, and sew on hooks first, using strong, cotton thread, not breaking thread between each hook.

Hold edge of hook ¼ inch from edge of material, the extra goods being used to face over the hooks, so only the loop of the hook is visible. Hem facing with small stitches.

Sew on eyes, starting at neck, passing thread from one to the other as with hooks.

Let the loop of eye project only far enough beyond edge of cloth to catch hook easily and prevent gapping.

Fasten eyes securely at both edges, then face the remaining edge of cloth over them as on hook side, with edge of fold invisible on right side.

HOW TO BONE A TIGHT LINING

Feather bone, whalebone and steel are used to bone a lining or dress. The easiest to sew on, and perhaps the most satisfactory, is feather bone, because it does not require a casing, and is so made that it can be stitched thru, on the machine.

It also comes in colors of black, white and grey.

Two and one-half yards will bone an ordinary lining, to be put on side front seams, under arm, side back and back.

Use shade that best matches color of lining.

Bones extend from bottom of lining (hiding ends in hem) to a height above waist line that will not show break in the seam.

On front dart seams, finish below height of dart; on underarm seams, at least 2 inches below underarm pit; on side back seam, 1 inch above underarm bone; and back seam, to same height as side back bones.

Cut each bone ½ inch longer than length to be finished.

Rip open bone-casing, cut off bone, and turn under casing.

The center of bone is over center of seam, and may be stitched thru the center, or on each edge of casing.

Care must be taken when stitching on machine, not to strike the bone, as space is allowed.

Mark height of every bone on every seam, then stitch from top, down to bottom of lining.

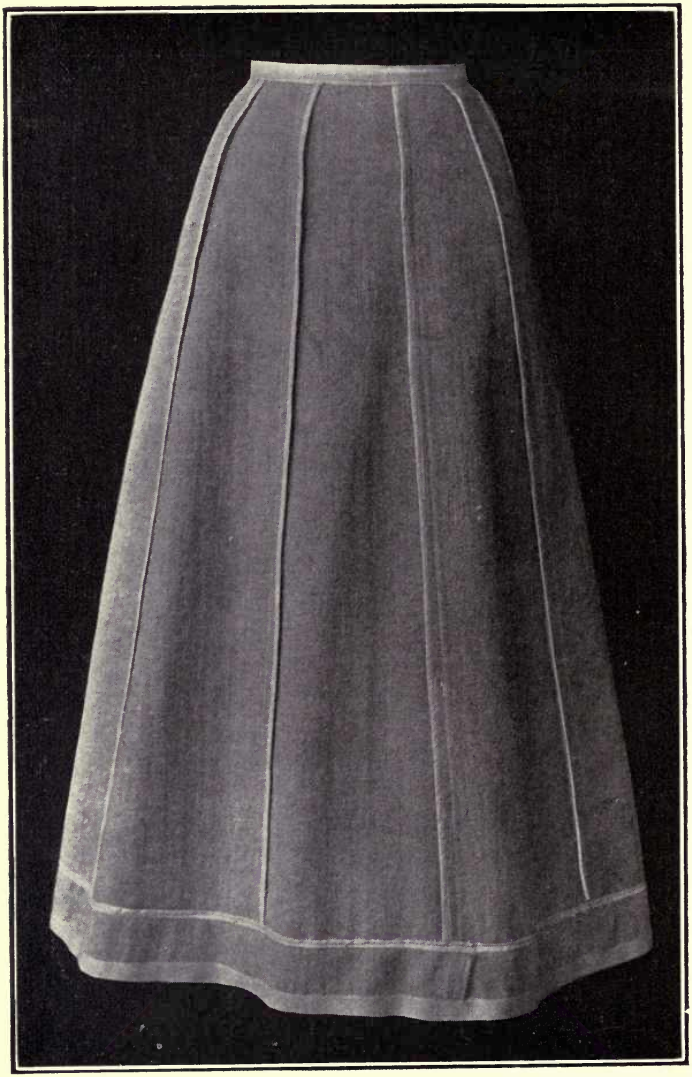
If a bone is to be sewed on center front, put on left side close to eyes, and cross stitch in place.

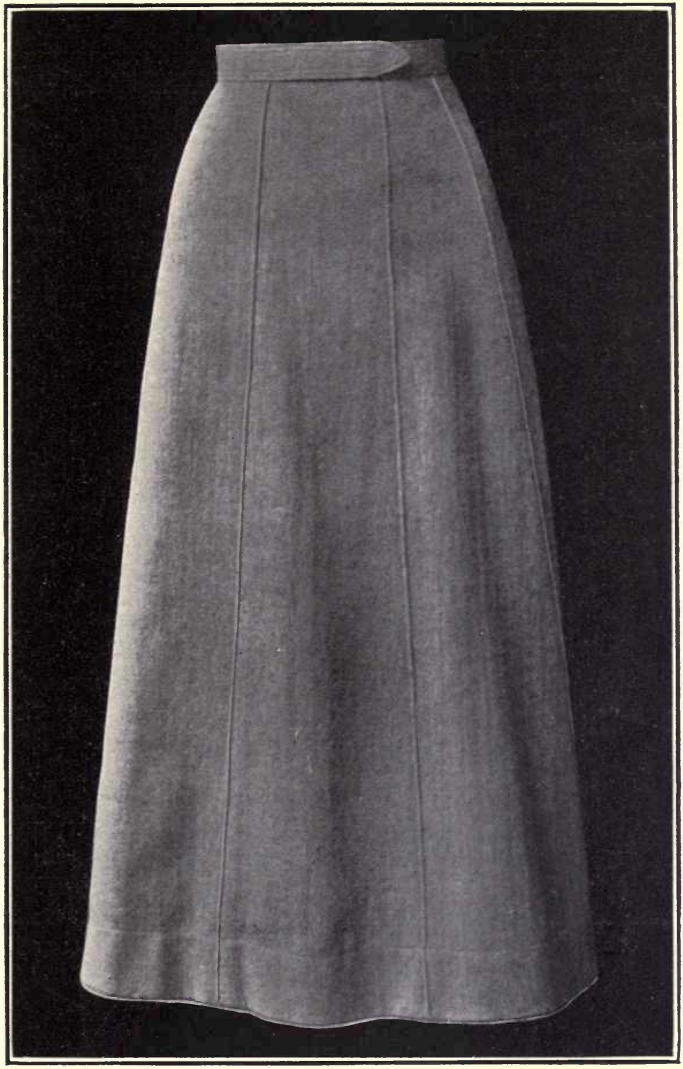
WORKING ON WOOLEN GOODS

Woolens or mixed weaves are much more difficult to cut out, join and finish than cotton materials, consequently a different method is used in working with them. This method is called tailoring, and includes moderate styles with straight lines and perfect curves and an exactness that is not necessary when draping or constructing gowns for fancy effects.

As the tracing wheel, unless it contains pulverized chalk, makes no impression on woolens or heavy woven materials, it is necessary to use tailor's chalk, which comes in most colors, or a loose method of basting that will permit the double thickness of cloth to have a guide-thread left on each piece. If the cloth to be cut out has an up and down, diagonal, or nap to it, each piece must be cut singly unless the goods is wide enough to fold on the warp. Cloth with a nap must always have the nap running down; diagonals must follow the same slant, and an "up and down" cloth generally has the largest part of the design at the top.

After placing the pattern on the material, in order to save, lay it all out before cutting, and baste all around the edge of every





piece, the waist line, darts or any line or design that would be necessary to trace or follow. Take an even baste stitch three-quarters of an inch long, leaving a loose thread which will permit the two pieces of cloth to be separated, the threads cut, and enough of the thread left on each piece to be a guide for seaming, turning hem, or marking any part of pattern that is necessary.

If chalk is used instead, the lines are first made on one side of the cloth from the pattern, then pins placed on the chalked lines and another chalk line drawn on the opposite piece. This last method is not as perfect as the first.

French seams are not used when stitching woolens, but the seams are finished with bias binding of percaline, cambric, etc., the two pieces joined and bound together, except on the back, shoulder and underarm seams of the waist, or any that are to be boned.

There are two ways of putting a skirt together; first, matching the gores on the wrong side, stitching, binding and then basting each finished seam on the right side, laying it flat, and turning each one toward the center of front, stitching on the right side close to the turn. A second stitching may also be made, using the presser

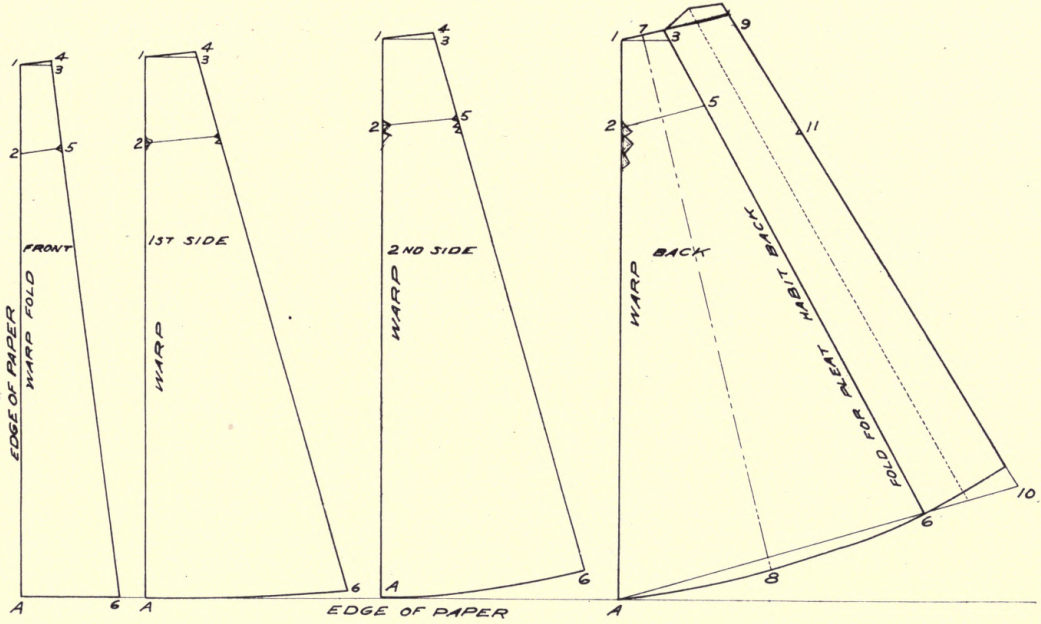
foot of the machine for a guide space; second, by turning under the bias side of every gore to the sewing line, which has the baste threads on it, and bringing the folded edge to the sewing line of the next gore it is to join. Care must be taken in order not to stretch the bias side beyond the straight. By pinning in place first, this will not happen. In following this method of joining a skirt, all seams but the back seam are finished first. Work on a table or flat surface.

Tailored skirts should have a hem or facing not over three inches when finished, because heavy material, when turned at different widths will make angles. To avoid this in a three-inch hem, let seams match after the bottom edge has been turned, and pin in fulness at top edge so the space is even, then press in these pleats, and hold them in place when stitching on the bias binding. All stitching such as hems, trimming bands, etc., should be stitched on right side of goods.

SEVEN-GORED TAILORED SKIRT

Note.—A choice should be given between this and the following skirt.

Material: Four yards (without nap) 36 inches wide.


1
4
3
2
5
FRONT
EDGE OF PAPER
WARP FOLD
A
6
1ST SIDE
WARP
2ND SIDE
BACK
7
9
11
BIAS
FOLD FOR PLEAT
10
8
EDGE OF PAPER

Serge, broadcloth, homespun, cashmere, etc.

Measurements: See directions for 5-gored skirt on page *77*, taking floor and dress lengths on front, back and both sides.

Before drafting, the proportions for every skirt must be worked out. Some gores are larger than others. The gores become narrower as the number of gores increases, and the relation of the waist and the hips to the bottom of the skirt must be always maintained.

A seven-gored skirt has a front, back and two side gores and the proportions and width around the bottom of the skirt is varied according to the prevailing style. A moderate style is therefore given, and any alteration on the width of gores at waist or hips may be easily done by first narrowing or widening the front and back gores, and putting the balance into the side gores. The waist and hips should never be smaller than measurements taken, and any flare or decrease in width at bottom should be made one-third of the distance below the waist line.

Write measurements in the following order, substituting pupil's for the model:

Waist (Model 24 inches, 12.)

Hips (Model 39 inches, 19½.)

Lengths:

	Floor	Dress
Front	(Model 40	37)
Side	(Model 42	39)
Back	(Model 41	38)

Waist Line

	Front	1st Side	2nd Side	Back
Model	2	3½	3½	3

Hip Line

Model	3	5¼	5¼	6

Width around bottom, 3½ yards without inverted pleat.

WAIST

Front gore—1/6 of half the waist measurement or 1/12 of the whole.

Back gore—¼ of half the waist measurement, or ⅛ of the whole.

Side gores—7/12 of half the waist measurement, or 7/24 of the whole.

Divide the side gores in half for each one.

HIP

Front gore—1 inch wider than the front waist.

Back gore—3 inches wider than the back waist.

Side gores—The sum of the front and back subtracted from ½ the whole hip measurement, dividing in halves for each side gore, or once and ½ the waist at hip.

Altho the side gores are the same width at the waist and hip line, the lengths vary, consequently each gore must be drafted separately. The side or hip length to floor is measured on bias side of first side gore, on warp and bias of side gores, and on the warp or straight of back gore.

Use **Dots** as illustrated and explained on underskirt draft.

TAILORED BELT

Cut a warp strip of same material as skirt, 3 inches longer than waist measurement, and 1¼ inches on the double, allowing for seams.

Point one end of belt and make the other straight.

Have an interlining of crinoline. Stitch all around the edge twice, and sew two hooks and eyes to equal the waist measurement, and one hook and straight eye or loop to fasten point of belt. Press well.

NINE-GORED TAILORED SKIRT

Material, 4¾ yards (without nap) 36 inches wide.

Measurements: Same as 5 or 7 gored skirt pattern.

A nine-gored skirt pattern has a front, back, and three side gores, and is drafted in proportion to the waist and hip measurements with the widths of each in accordance to the prevailing fashion. A moderate draft is here given which can be increased or decreased around the bottom of skirt by adding more or less inches to the original draft, starting from one-third the length from waist line.

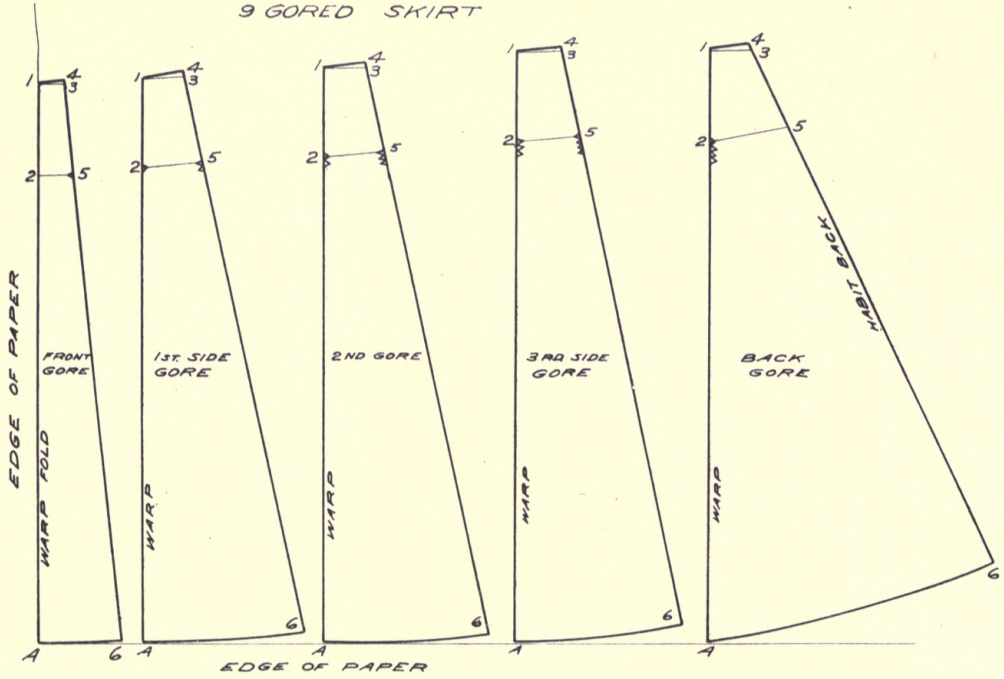
Write out the measurements in the following manner, substituting pupil's for model's.

Waist (Model 24 inches.)

Hips (Model 39 inches.)

Lengths:

	Floor	Dress
Front	(Model 40	37)
Side	(Model 42	39)
Back	(Model 41	38)


9 GORED SKIRT
EDGE OF PAPER
FRONT GORE
WARP FOLD
1ST. SIDE GORE
WARP
2ND GORE
WARP
3RD SIDE GORE
WARP
BACK GORE
WARP
HABIT BACK
1
2
3
4
5
6
A
EDGE OF PAPER

Waist Line

Front	1st Side	2nd Side	3rd Side	Back
Model 1½	2 2/3	2 2/3	2 2/3	2½

Hip Line

2¼ ..... 4 ..... 4 ..... 4 ..... 5¼

Take one-half the waist measurement in proportioning the skirt, and let one-third of this equal the back and front gores, the remaining two-thirds being equally divided among the three side gores. The front gore is one inch narrower than the back gore.

Take one-half the hip measurement in proportioning the skirt, let the hip measurement on front gore equal ¾ of an inch more than front waist measurement; the hip measurement on back gore equal twice the measurement of back waist, and the balance number of inches equally divided among the three side gores.

With a 45-inch rule or yardstick, placed on these correct proportions found for the waist and hips, and draw lines as on 7-gored skirt, which proportions the width around bottom also.

Make bias side of first side gore, both sides of second side gore, and the straight side of back gore, equal the side dress length measurement.

The front hip equals ¾ inch more than front waist.

Side hip equals 1½ the side waist.

Back hip equals balance number of inches remaining from sum of front and the 3 side gore measurements at hip.

Finish as explained in previous skirt.

HOW TO SEW BRAID ON BOTTOM OF SKIRT

When sewing braid on skirt, baste 1/16 or ⅛ inch beyond edge of turned hem, starting 2 inches to right of center back seam, and basting on edge of hem on right side. Carry braid 2 inches to left of center seam when finishing, lapping evenly.

If hem has been stitched at top, sew braid on by hand, but it is much stronger if sewed by machine. To stitch the latter way, open up hem, and stitch on top edge of braid.

COAT (Unlined)

Made on French lining model.

Material 4 yards 36 inches wide, for 36 bust.

Linen, duck, kahki, etc.

Measurements:

Take same measurements as for French lining, measuring over dress waist.

Make center front line 1 and 4, 3 inches to right of cloth, curving slightly between 1 and 2 for lapels, making line 2, 5 and 6 straight from Dot 2, carrying front as many inches below waist line as desired, for the length of coat.

Cut 4 front pieces, as each front is faced with same material.

Trace waist and all other lines as on former draft, matching, pinning and basting very carefully.

Try on, making any alterations before stitching.

All seams, but shoulder and underarm seams, are bound together, these others being bound separately and pressed open.

The front facing is interlined with crinoline or canvas, matched to right side, and all three pieces stitched together on wrong side. Stitch lower edge also, the length to be finished

If lapel is not wished, crease a line ½ the distance between Dots 1 and 7 at neck, to depth of armseye measurement or below, and cut on this

line. This allows for a shawl or flat collar, which is fitted and cut after shoulder seams are finished.

Turn front facings and lower edge on right side, making perfect corners, and baste in place for two rows of stitching.

Baste side front and side back seams flat, with bound edges facing center front and center back, respectively, and stitch on right side, ¼ inch from seam.

The fronts are stitched on edge and ¼ inch in from this stitching, or, the width of the presser-foot apart. Use lock stitch machine for all outside stitching, with great care in keeping the goods smooth, and doing perfect work.

Cut a paper pattern for a collar to fit neck, shaping outside edge as desired, with seam in center of back.

If a shawl, or sailor collar is used, it is stitched in with the facing, an extra under facing being sewed to back neck, and extending to shoulder seams. If double thickness of cloth is used, interline with crinoline. A plain turn-over collar is cut with double thickness of material, and canvas interlining, seamed in the center. It folds on the line with the lapels, the under part of collar being stitched solid ¼ inch between each stitching.

The bottom of coat is turned under a bias strip of crinoline, bound ½ inch from edge, and stitched as far as front facings.

The sleeves are made on the French lining draft, with larger measurements taken over dress sleeve. The underarm seams are bound separately, and pressed, the other seams being bound together, and turned toward underarm seam when joining to body of coat. Face bottom of sleeve and stitch 2 inches from turned edge to correspond with stitching on fronts. Bind armsizes.

Press well over tailor's pad, to keep bust round and well-shaped.

Crease sleeves on double to elbow.

Sew hanger to back neck.

Attach name and date.

QUESTIONS

1. What measurements are necessary to draft a drawers pattern? Draw illustration with the dots.

2. What is the sewing line?

3. What is a lap, how deep should it be and how put on?

4. What measurements are taken to draft an underskirt?

5. How is a belt sewed on, and what is the width used on underclothes?

6. Where is the hip measurement taken?

7. What is the depth of placket on an underskirt?

8. Describe and illustrate the straight and bias of a skirt and how joined.

9. Which way of the goods are all garments cut? Why?

10. Why is the floor length of a skirt taken instead of dress length except on the front gore?

11. What measurements are taken for drafting a shirtwaist?

12. Illustrate how the shirt waist draft is used for a corset cover, chemise and night gown. Have center front line 3 inches.

13. What does "depth of armseye" mean and how is it found? The front and back.

14. What are the alteration seams on a shirt waist and how much is allowed on the different seams when cutting out pattern?

15. Give model measurements of a shirt waist.

16. Give model measurements of a skirt.

Illustrate a model with the center front gore 3 inches long and the rest of pattern in proportion.

17. How can the 5-gored underskirt pattern be made into a circular skirt?

18. What measurements are necessary to construct a sleeve draft? Illustrate.

19. Where does the seam of a one-piece sleeve join the waist?

20. Make an illustration of a sleeve draft on a 2-inch basis, for the first line.

21. What is a French lining?

22. How does sewing on woolen goods differ from cotton?

23. Proportion a 7-gored skirt with 36 waist, 40 hip, lengths to floor; front, 36; side 37½; back 37.

24. How is braid attached to bottom of skirt?

25. Explain method of making a coat.

GLOSSARY OF TEXTILES

Note.—As widths vary and prices fluctuate in different cities, it is impossible to give any accurate figure that can be followed in all cities, but an approximate retail price and width are here given, which may assist the pupil in obtain-

ing a general knowledge of textile fabrics and be a guide when purchasing.

Novelties are not included.

Albatross, a plain, woolen fabric, similar to nun's veiling. Width 44 inches; price 75 cents.

Alpaca, cloth obtained from the hair of the alpaca, llama and vicuna animals. It has a high luster. Brilliantine, mohair and sicilian come under the same head. The warp thread is cotton. Width 40 inches; price 75 cents up.

Basket Cloth, cloth having the warp and woof threads interlaced the same way. Width 45 inches; price $1.50 up.

Batiste, very sheer cotton or linen fabric. Cotton, width 44 inches; price 35 cents up. Linen, width 28 inches; price $1.00 up.

Beaver Cloth, heavy, double woven, woolen cloth, used for outside garments. Width 56 inches; price $3.00 up.

Bedford Cord, woolen or cotton having a warp cord. Woolen, 54 inches wide; price $2.00 up.

Bengaline, a high grade, heavy woven silk, having a warp cord, similar to silk poplin. Width 26 inches; price 75 cents up.

Bleaching, making white by sunning or wetting.

Bolt, refers to materials such as cloth, ribbon, braid, etc., sold in quantity, containing a certain number of yards to make a bolt—usually 10 to 60 yards.

Brilliantine, a kind of **Mohair,** with more gluton in it. Width 36 inches; price 50 cents up.

Broadcloth, wide woolen cloth, with satin or glossy finish on face, and a nap. Width 52 inches up; price $1.00 to $5.00.

Brocade, a soft, fine silk cloth with figures or designs woven to give same effect as a damask. Width 27 inches; price $2 up.

Calico, coarse quality muslin or printed cloth. Width 36 inches; price 5 cents to 15 cents.

Cambric, thin, glossy muslin. Width 25 to 36 inches; price 5 cents up.

Cambric is also a general term for plain cotton cloth.

Camel's Hair, double width cloth made from the fleece of camels hair goat. It is woven with a twill, the hairs protruding and causing a rough surface. Width 54 inches; price $1.50 up.

Canton Flannel, soft cotton flannel with nap;

also called cotton flannel, fleeced lined, tennis and daisy flannel. Width 28 inches; price 15c up.

Canvas, a heavy plain woven cloth either linen or cotton used for stiffening. Linen comes 25 inches wide. Price 25c up. Cotton, 1 yard wide; price 10 cents up.

Cashmere, a plain, soft woolen cloth. Width 36 to 48 inches; price 75 cents to $1.50.

Challis, a light weight dress goods of cotton, wool or both.

Cotton, width 24 inches; price 20 cents up.

Wool, width 32 inches; price 75 cents up.

Mixed, width, 40 inches; price 50 cents up.

Chambray, a kind of gingham. Width 28 inches; price 25 cents.

Cheese Cloth, a thin, open-weave muslin, bleached or unbleached. Width 36 inches; price 5 cents up.

Cheviot, a twilled cotton or woolen with a rough nap. Width, woolen, 54 inches; price $2.00. Cotton, 27 inches; price 25 cents up.

Chiffon, a thin, gauzy silk fabric with a soft sheen to it. Width 44 inches; price 75 cents up.

Chiffon Cloth, a highly finished broadcloth with a satin face. Width 44 inches; price $2.00 up.

China Silk, plain, woven silk, made in China, India and Japan. Width 26 inches; price $1.00 to $2.00.

Corduroy, a strong, corded, pile-woven cloth made of cotton only. Width 27 inches up; price 75 cents up.

Cotton, any white cloth made entirely from the cotton fiber. (See article on Cotton.) Width usually 1 yard; price 5 cents up.

Covert Cloth, a strong twilled woolen cloth for coats, of tan colors; 2 yarns. Width 56 inches; price $3.00.

Crash, coarse toweling. Width 18 inches up; price 10 cents to 20 cents.

Cravanette, a light weight waterproof woolen cloth for coats and suits. Width 50 to 60 inches; price $2.00 to $4.00.

Crepe, a cotton, silk, woolen or mixed cloth, with a curled or puckered irregular surface. Width, cotton, 27 inches up; price 10 cents up. Silk, 21 inches; price $1.50 up. Woolen, 52 inches; price 75 cents. Mixed, 52 inches; price $2.00.

Crepe de Chene, a high grade silk with an irregular wrinkled surface. Width 24 to 54 inches; price $1.00 to $3.00.

Denim, a heavy, cotton fabric for aprons, upholstery, etc. Width 36 inches up; price 25 cents up.

Diagonal, a worsted cloth with a diagonal twill. Width 52 to 58 inches; price $2.00 up.

Dimity, a fine lawn or muslin with a warp cord. Width 28 inches; price 5 cents to 40 cents.

Duchess Satin, a thin, high grade quality satin with less stiffening and a high luster. Width 20 inches; price $1.00 and up.

Duck, a strong, plain weave of linen or cotton. Linen, width 27 inches; price 40 cents. Cotton, 28 inches; price 20 cents.

Etamine, a fine, evenly-woven woolen or silk fabric. Width, woolen 54 inches; price $1.00 up. Silk, 28 inches; price $1.50.

Farmers Satin, a satin-weave lining with a cotton warp and worsted woof. Width 27 to 54 inches; prices 75 cents to $1.50.

Filling, the woof of goods, opposite to the warp.

Flannel, a cotton, woolen or mixed cloth loosely woven and with an unfinished surface. Width, cotton, 36 inches; price 15 cents.

Woolen, width 24 inches; price $2.50 up. Mixed, Width 36 inches; price 25 cents.

Flannelette, see Canton flannel.

Flax, a plant that produces the linen fiber. See article on linen.

Foulard, a thin, plain or twilled silk that has a conventional printed figure on it. Width 20 to 40 inches; price 50 cents up.

Galatea, similar to duck, with smooth finish, 29 inches; price 20 cents.

Gingham, a cotton cloth, plain, striped, plaided or checked which has been woven in the loom. Width 27 inches and over; price 10 cents up.

Glacé, a glossy or luster finish given to threads and fabrics.

Grass Linen, a thin, transparent muslin (usually natural colored), made from ramie. It is used for lining. Width 27 inches; price 35 cents up.

Gros Grain, a dull-finish silk with a fine woof cord. Width 20 inches; price $1.50 up.

Habutai (hab-u ti), a Japanese all-silk material, of fine smooth weave. Width 25 to 36 inches; price 35 cents to $1.50.

Hair Cloth, a stiff lining made from horses' manes and tails. The warp thread is the hair, while the filling is of cotton or linen. Width 24 inches; price 35 cents.

Hemp, see article on hemp.

Henrietta Cloth, a fine quality of worsted, woven cloth, with less luster than cashmere. Width 44 inches; price $1.00 up.

Homespun, cloth woven by hand and not in factories. The British Isles are famous for these cloths. It also applies to a rough woven woolen manufactured goods. Width 54 inches; price $1.50 up.

Hyde Grade, light weight, firmly woven cloth in cotton, wool or mixed, used for linings and underskirts. It is the manufacturers' name and does not specify any one material, but includes percales, moreens, etc.

India Lawn, a fine, high-grade muslin. Width 30 inches; price 25 cents up.

Indian Head, a firm, coarse woven cotton cloth, similar to duck. Width 36 inches; price 15 cents.

Jute, see article on same.

Khaki, a dust colored cotton drilling, deriving its name from the U. S. Army, at the time of the Spanish-American war. Width 28 inches; price 35 cents.

Ladies' Cloth, a light weight broadcloth. Width 52 inches; price $1.00.

Lawn, a thin, cotton or linen cambric or muslin. Width 36 inches; price 25 cents up.

Linen, see article on same.

Long Cloth, soft, fine bleached muslin, used for underclothes. Width 36 inches; price 15 cents to 25 cents. 12 yards at $2.00.

Madras, a kind of gingham, but heavier, made in cotton and silk, plain or figured. Width 28 inches; price 25 cents up.

Marquisette, a kind of voile of a more open weave, made in cotton and silk. Cotton, width 28 inches; price 25 cents up. Silk, 44 inches; price $3.00.

Mercerized, a soft finish given to linen and cotton, thru a process of a caustic soda solution.

Messaline, a soft silk or cotton with a satin finish. Cotton, width 36 inches; price 35 cents. Silk, width 26 inches; price $1.00.

Mohair, a fine quality alpaca, from the angora goat. Width 40 inches; price 75 cents up.

Moire, a watered effect, made in silks, moreens, etc.

Moreen or Morrain, a strong, closely-woven material, with a cotton, wool, silk or mixed warp and a mohair filling.

Cotton, width 27 inches; price 35 cents.

Wool, width 26 inches; price 60 cents.

Silk, width 24 inches; price 75 cents up.

Mixed, width 24 inches; price 50 cents.

Mousseline de Soie, a high-grade silk muslin. Width 48 inches; price 50 cents up.

Mull, thin, sheer muslin. Width 24 inches; price 20 cents up.

Muslin, plain, woven cotton cloth. A general term.

Nap, the down of the fibers covering the surface of certain kinds of cloth. It follows one direction, and may be raised or flat.

Noil, short fibers of the short staple woolen fibers; waste.

Nuns Veiling, a thin, woolen goods, plain woven and dyed black. Width 44 inches; price 75 cents.

Outing Cloth, see Canton flannel, daisy flannel, etc.

Organdie, thin, sheer muslin with a fine and finished texture, plain or printed, with delicate flower patterns. Width 36 inches; price 25 cents up.

Panama, a light woolen material. Width 54 to 58 inches; price $1.00 up.

Panne, a light weight velvet, with a long nap

and a high luster. Width 18 inches; price $1.00 up.

Paon, a fine, all-silk quality of velvet. Width 18 inches; price $3.00 up.

Peau de Cygne, a thin, twilled silk. Width 20 inches; price 75 cents to $2.00.

Peau de Soie, a soft, satin finish silk. Width 35 inches; price $1.00 to $3.00.

Percale, a closely woven cotton cloth with more dressing than muslin. Width 28 to 36 inches; price 15 cents up.

Percalene, a watered or glazed surface cotton cloth used for linings. Width 36 inches; price 20 cents up.

Persian Lawn, a sheer quality of lawn. Width 32 inches; price 15 cents to 25 cents.

Persian Silk, silk with a Persian pattern woven in the loom. Width 19 inches; price 85 cents up.

Pique or Pecay, an even corded effect, made on the warp threads of cotton cloth. Width 27 inches; price 25 cents.

Pique (French), a fine quality pique that is imported. Width 28 inches; price 50 cents up.

Pongee, a natural colored silk cloth from Shantung, made from the cocoons found on the

mulberry tree. Width 21 to 34 inches; price $1.00 to $2.00.

Poplin, a cotton, woolen or silk dress goods with a cord woven in the woof thread.

Cotton, width 24 inches, price 15c.

Woolen, width 20 inches, price $1.50.

Silk, width 24 inches, price 75c up.

Mixed, width 40 inches, price $1.50.

Print, any cotton cloth with a printed pattern stamped on it. See calico.

Rajah, a silk similar to pongee, with an uneven thickness in the woof thread. It is also imitated in cotton. Silk, width 18 inches, price $1.50 up. Cotton, width 24 inches, price 35c.

Russian Crash, a coarse grey, woven crash used for dress goods and embroidery as well as toweling. Width 17 inches, price 20c up.

Ramie, see article on Linen.

Sateen, a fine threaded, closely twilled cotton cloth, with a glossy finish. Width 36 inches, price 25c-50c.

Satin, a silk or cotton and silk fabric with a high luster on the right side and a dressing in it. Width 22-24 inches, price $1.00 up.

Satin Foulard, a foulard silk, with a satin finish on the right side.

Satin Linings—Silk back, width 30-40 inches, price $1.50-$2.50. Satin back, width 36 inches, price 50c. Silk Serge, width 30 inches, price $2.00 up. Silk Taffeta, width 24-36 inches, price 75c up. Cotton back, width 36 inches, price 70c; herringbone, width 20 inches, price 75c up. Surah serge, width 30 inches, price $2.00 up.

Scrim, a thin, partly transparent cotton or linen cloth. Width 36 inches, price 25c.

Seersucker, a sort of gingham with a crinkly surface. Width 36 inches, price 15c.

Selvage, the edge of a cloth running on the warp threads, to prevent raveling.

Serge, a fine plain or diagonal weave of woolen goods varying in widths and price.

Herringbone, striped and fancy weaves. Width 54 inches, price $1.50 up.

Tailor's serge. Width 56 inches, price $2.50.

Army serge. Width 64 inches, price $4.00.

Sheeting, linen and cotton cloth of specified widths, weights and price, manufactured to fit regulation size mattresses on beds. Width 1/3 yards, price 10c up.

Shepherds Plaid, a name given to a small, even black and white checked goods in cotton and woolen.

Shoddy, a refuse waste from wool or woolens while in the process of manufacture, and used as filling or woof on cheap materials.

Shot, a changeable color effect given to silk.

Sicilian, similar to alpaca, with cotton warp and mohair woof. Width 36-54 inches, price $1.00-$2.00.

Silesia, a lining cloth made of fine and closely woven cotton. Width 36 inches, price 25c.

Silk, a fabric made from the silk fiber of the larvae from many kinds of moths or silk worms. See article on Silk.

Silk Muslin, a silk fabric of the same weave and weight as fine muslin. Mousseline de Soie is another name for it. Width 36 inches, price 75c up.

Sizing, starching, flouring or stiffening the warp-threads to make them brittle before weaving.

Skinner's Satin, a heavy, fine grade of satin lining, used for coats. Width 36 inches, price $1.00-$3.00.

Spinning, the process of drawing out and twisting into thread, textile fibers of any description by hand or machinery.

Suitings, varieties of woolens, worsted or cot-

ton mixed fabrics of a plain, heavy texture for suits.

Surah, a twilled silk. Width 24 inches, price 75c.

Symite, a silk and wool fabric. Width 44 inches, price $2.00.

Taffeta, a plain, even woven silk the same on both sides, with more or less stiffening. Width 18 to 36 inches, price 50c up.

Tailor's Canvas, a strong, stiff canvas of high quality used in coats. Width 25 inches, price 25-50c.

Tennis Flannel, see flannelette.

Textile, any fabric woven in the loom.

Tweed, a twilled, woolen suiting, similar to homespun. England and Scotland are noted for them. Width 56 inches, price $2.00 up.

Twill, a diagonally woven effect in cloth.

Twist, a silk thread of two or more strands twisted together, heavier than sewing silk, put on spools of 50 yards each or more.

Velvet, a closely woven silk material with a short pile on the right side. It is formed by a loop, which is afterwards cut.

Cotton back. Width 18 inches, price $1.50.

Linen back. Width 32 inches, price $3.00.

Silk back. Width 18 inches, price $5.00 up.

Velveteen, a velvet woven, all cotton material wider than velvet. Width 21 inches up, price 50c up.

Venetian Cloth, a high grade, twill-woven cloth, of worsted, made in plain colors like broadcloth. Width 50 inches, price $1.50 up.

Victoria Lawn, a finer grade than Persian. Width 36 inches, price 25c up.

Voile, an open, even woven cotton, woolen or silk fabric, with some stiffening in it. Width 46 inches, price $1.00 up.

Wool, see article on Wool.

Woolens, cloths produced from the wool fibers, and of a wider width than cottons.

Weaving, the art or process of forming cloth by interlacing yarn in a loom with a warp foundation, and a woof filling.

Worsted, a variety of yarn from the wool fibers spun from the long staple and in spinning, is twisted tighter than usual.

Yarn, any kind of animal or vegetable spun thread used for weaving; not sewing thread.

Zephyr, relates to soft, fluffy goods as flannel, gingham, etc.; also yarn.

Zibeline, woolen dress goods, with long hairs woven in from the fur of camel's hair order. Width 54 inches, price $1.50.

PART THREE

EMBROIDERY

Hemstitch or Drawn Work Sampler.
Hemstitched Hand Towel.
Embroidery Stitch Sampler.
Center Piece in all White Work.
Colored Embroidery Piece of Filo Silk.
Lace Stitch Sampler.
Lace Design.

Hemstitch, drawn or open work sampler.

Material: Scrim, canvas or linen, 8 inches (warp) by 5 inches (woof). Fray each short end of sampler, 1 inch up, then overcast all edges that are not selvage, with No. 70 or 80 cotton thread. One end is left frayed, the other is fringed.

To **fringe,** take groups of 10 strands of the hanging threads, and tie them into a knot, ¼ inch below unfrayed cloth.

Knots should be uniform.

One inch from top of plain fringed end, pull 8 woof threads.

Hemstitch, drawn or **open work** is made by pulling out warp or woof threads, grouping them together, to form a design, and connecting these

groups with a hemstitch. There are numerous ways of grouping as well as hemstitching, and drawn or open work is not limited to hemstitching, but is carried into complicated patterns involving many lace and embroidery stitches.

On this hemstitched sampler, there are but 4 ways given, being simple and effective in design.

A fine thread is used for the hemstitch, unless a thread taken from the warp of the scrim or material, is preferred.

To work the **first row,** start on upper side of drawn threads, at left side, with needle on 2 or 3 threads of the goods. Take 5 warp threads, carry needle over them from left to right, bringing needle into goods again, 2 or 3 threads above open space, as before. Repeat to opposite edge of sampler. This is the easiest method of hemstitching, and may be used for towels, napkins, table cloths, etc.

To work the **second row** of hemstitching, pull out 8 woof threads as before, 1 inch from the last edge. Take stitches the same way, with same number of threads in each group. Do both edges. This gives the effect of parallel bars, and is sometimes called "ladder stitch."

To work the **third row,** pull out 8 woof

threads, 1 inch from last edge, and take 6 (an even number) of warp threads to a group. Make one edge as the preceding rows are done, and on opposite edge, split the number of strands of threads, bringing needle up between them and taking also half of the strands in the next group. This method of work gives the diagonal lines.

To work the **fourth row,** pull out 8 woof threads, 1 inch from last edge. Thread a warp thread of scrim or material used, longer than width of sampler. Start at left, in center of pulled threads, and fasten securely to 3 of the strands.

The next 3 threads wind over the 3 succeeding threads, which turns the center of the groups, giving an oval effect. Take next stitch the same and so on to the end, keeping the scrim thread in center of space, and in one continuous line. This is a very simple and ornamental method of treating wide spaces.

Attach name and date.

HAND TOWEL

Material: Plain linen toweling or huckaback, 12 inches wide and 24 inches long. This includes hem.

On either end of towelling, turn a 1½-inch hem (finished). From the hemstitched sampler, choose a method for finishing ends of towel, and work as explained. Finish edges of hem with a very fine over and over stitch.

Press well, attach name and date.

EMBROIDERY

Embroidery is the art of ornamental needle work, used to decorate or enrich textile fabrics of all kinds.

It must be worked or woven on a solid background, which distinguishes it from tapestry or lace. It is spoken of in the Old Testament by Moses, and the church shows the first examples obtainable of embroidery, thus giving it place before painting. The earliest work was done on canvas with the cross stitch, and the Egyptians, Persians, Grecians and Romans became skilled in this art, altho Asia Minor claims the invention of embroidery.

At the beginning of the Christian era, the work took the form of holy images, being illustrations of the Old and New Testament stories. Instead of these being worked with the cross stitch, the feather or plumage stitch was used.

Women of all ranks were interested in this work and later men became adept with the needle. In England, the Copes, many of which are preserved in the museums, are wonderful and beautiful examples of this art. In the 13th century, the chain stitch became the method of working out design, while the 20th century has adopted all varieties, with a preference for the satin stitch.

Every country shows its individuality in its mode of work, and accordingly derives its name, —as French or satin, Irish or Mountmellick, Madeira or eyelet, Danish or hedebo and hardanger, Austrian, Hungarian, Roumanian, Italian or cut work, Mexican, Japanese, Chinese and others.

The classification between plain and ornamental stitches should be thoroughly understood, and the application of embroidery in preference to outline and solid work must be suited to the textile it is to embellish. Simplicity in design, regularity of stitches, and harmony of colors include and demand care and thought.

The correlation between the drawing course for the designs necessary to be embroidered, should be here introduced, giving the pupil a wider range and an added interest in her work.

EMBROIDERY SAMPLER

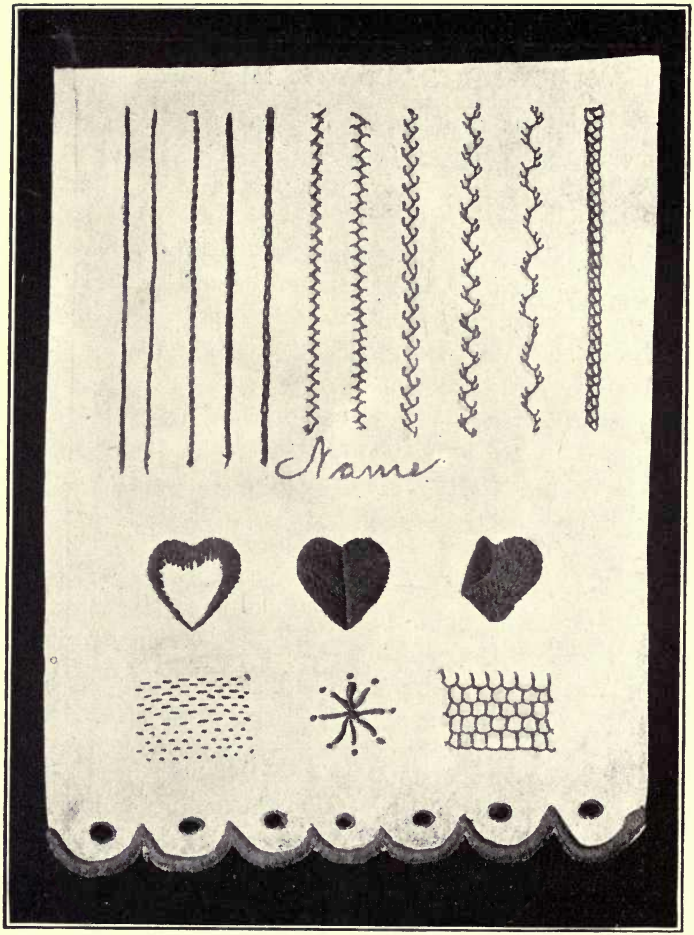
Material: Cotton or linen cloth, 12 inches (warp) by 9 inches (woof).

On three sides of cut sampler, turn a ¼ inch hem. Crease and fold in opposite direction, where edge of hem meets. This method of turning and sewing a hem, is called **French hemming,** and is used on handkerchiefs, napkins, tablecloths, etc. It is the most satisfactory way of finishing narrow hems.

With 90 thread and a No. 9 needle, start at right end, working toward left, with a tiny slant over and over stitch, just catching the folded edge of hem to fold of goods.

One-half inch up from raw edge of sampler, draw 7 scollops, using for a guide, a spool of No. 24 cotton thread. Start from either end of raw edge, making center scollop smaller if necessary to fit space. Back (whole) stitch the lower edge, using a No. 5 needle and crochet luster cotton to contrast with background.

The **embroidery buttonhole** is worked to finish off this edge. It differs from the tailor's buttonhole, in direction of stitch, as well as method of working,—is easier and more quickly done, but will not bear much strain.


Name

Start with a few running stitches at left edge of sampler (knots are not used for embroidery stitches), coming up on right side of material. Work toward right edge of sampler, with thread always to left of needle. Take straight or vertical stitch ¼ inch deep, coming out on scollop line. With thread under needle, hold it down with thumb of left hand, and pull thru firmly. Take next stitch in same manner, and so on to edge of sampler. Keep edge even at top as well as bottom, with each stitch parallel with the first stitch.

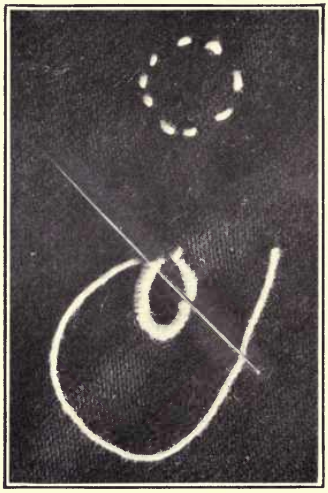
This method of finishing a raw edge, is used for towels, doilies, collars, etc., when a hem is not desired. Variations of this buttonholing may be used, by making one short stitch and one long stitch, alternating, or graduating the depth of stitches, with lines converging toward center of each scollop.

Above and in center of each scollop, make, with a stiletto or round pointed instrument, an eyelet or round hole to be embroidered. Overcast or make running stitch around edge of each eyelet.

An **eyelet stitch** is a close over and over stitch, pulled firm in order to keep the proper shape.

No space is left between each stitch. Finish on wrong side, with same direction of stitch as the preceding one, so join will not be visible. Begin each eyelet in a different part of circle or oval, as joins on lace are made.

Eyelet embroidery is the simplest and most

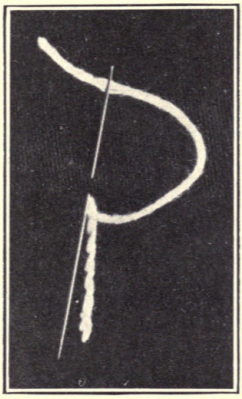


effective of all embroideries, and wears well. Our Colonial mothers became experts in it.

In center of sampler, write pupil's last name lightly in pencil, spacing evenly from outside

edges. This is outlined, starting first stitch at end of last letter, working toward front, to let the crossings come as in writing.

In upper half of sampler, make 11 vertical lines for the most important embroidery stitches, namely: Crewel (2 kinds), couching, stem, chain, herring-bone, cross stitch, herring-bone cat stitch,



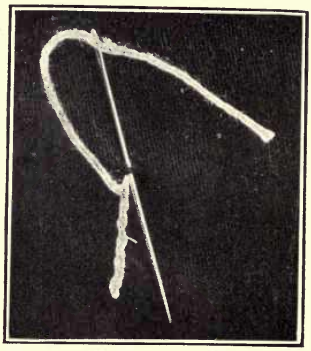
single feather, double feather, triple feather or coral and ladder or Creton.

The first five are outline, altho sometimes used for filling, while the remaining ones are for embellishing edges, hems, tucks, etc.

Space these first 5 lines, ½ inch apart, the

remaining lines, marking double (¼ inch apart) ½ inch from each outside line.

The **first Crewel stitch** is started at base of line, and worked upwards. With a few running stitches to start, come up on right side. Take one long stitch ⅜ or ¼ inch long, with thread to right of needle as illustrated. Pull thru, take next

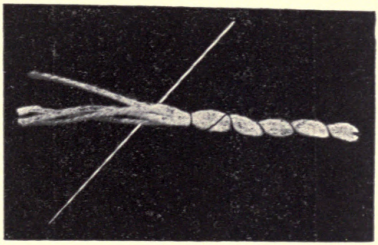


stitch ½ as long, sticking needle ⅛ inch above last stitch and half way between first stitch, to right of it. Repeat to top of line, finishing on wrong side of sampler with an over and over stitch. The wrong side of stitching resembles the whole back stitch.

The **second Crewel stitch** is worked like the first Crewel, only the thread is held to left of the

needle, instead of right, giving a reverse slant to the stitch.

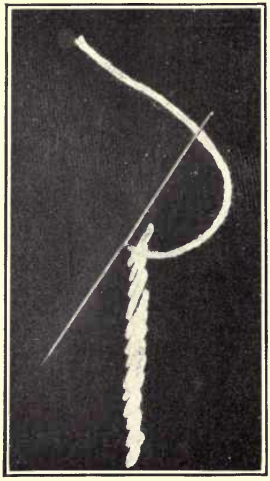
Couching is overcasting over two or more strands of thread, silk, cotton, gold or silver cord, etc., on a line to be outlined. The strands may lie flat or twisted, but on this sampler use 3 strands of the luster cotton, and couch with fine white thread. Start at base of line, holding



strands flat and firm, and take small slanting overcast stitches ⅛ inch apart. Couching in different colored thread tends to blend colors too closely if stitches are too close, so the couch thread is usually the color of the background of the material, or the color of the cord to be couched. The Japanese and Chinese show the greatest skill in this mode of embroidery, using it for outline or solid and generally with gold or silver cord.

couched in the same shade with fine cotton thread or silk.

The **stem stitch** is similar to the first Crewel stitch and can also be reversed as in the second. It is worked slanting instead of vertical, giving a broader outline than either of the Crewel stitches.

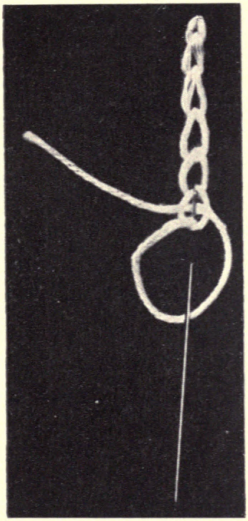


It may be worked almost horizontal, resembling the satin stitch. Start at base of line and finish as with other stitches on wrong side at top.

The **chain stitch** commences at top of line, and worked down. Coming up on right side, take a

stitch ¼ inch long leaving a loop of thread on right side, before pulling up or taking next stitch.

Go back into same hole as needle came out of, and take another stitch the same length, letting

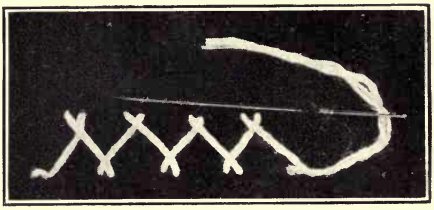


needle separate the loop of preceding stitch. This stitch resembles the crochet stitch or the stitch on the automatic machine, and is very effective for some kinds of embroidery.

The **herring-bone** stitch is a slant stitch, and

worked in 2 different ways. When the stitches are caught on the vertical, they are called catch stitch or fish bone. When the stitches are caught on the horizontal, they are called cat stitch, and if each stitch joins the preceding one, it becomes the cross stitch.

Both are worked from left to right.

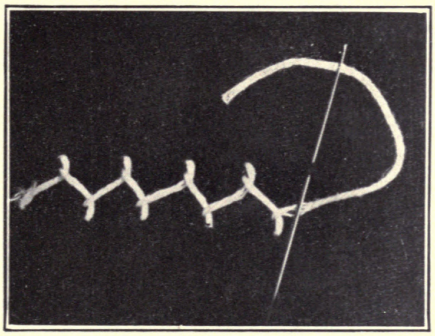


To make the **catch stitch,** turn sampler until the guide lines are horizontal. With thread on right side, of goods on lower line, make a slanting stitch to the top line, taking up 1/16 inch of goods on the vertical. Keep thread under the needle, so the upper thread crosses the under. Make another slanting stitch in the opposite direction, sticking needle in on lower line about ¼ inch from the first stitch, taking up 1/16 inch of goods on the vertical. The thread is held under the needle as before. Repeat these stitches to end of line.

The **cat** or **cross** stitch is worked the same as the catch stitch, except the goods is taken up on the horizontal instead of the vertical, giving an entirely different effect.

Both of the stitches have many variations.

Single feather stitches, with all its variations,

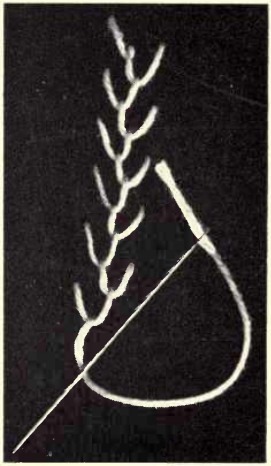


is a form of buttonhole stitch, and may be worked vertically or slanting.

Those worked on sampler are vertical. Start at top of parallel lines, with needle coming up on right side in center of space. One-quarter inch below this point, on right line, take a vertical stitch ¼ inch deep. Hold thread under needle as in embroidery buttonhole stitch, before pulling

thru. Cross to opposite line ¼ inch below this last point, and make another vertical stitch ¼ inch deep, with thread under needle. Cross to right side again, and keep reversing to bottom of line.

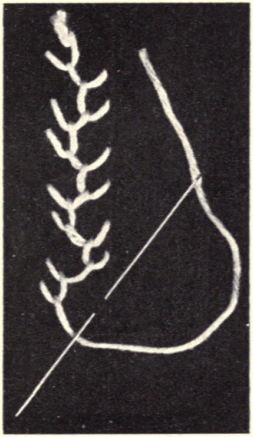
This stitch is used for all kinds of ornamental

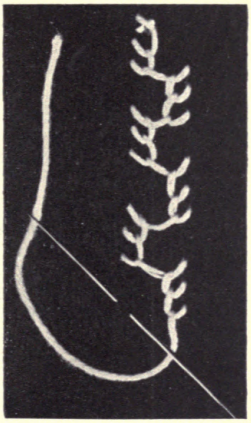


line work, and, like its name, gives a feathery effect to a straight line.

The **double feather stitch** is worked the same as the single, with two vertical or slanting lines on each side, before crossing to opposite side.

Each stitch is the same depth (⅛ inch), and grouped together closely—the second below the first, with same direction of stitch. Variations of this in slanting and spacing, give entirely different effects, the greater the slant, the more feathery the result.

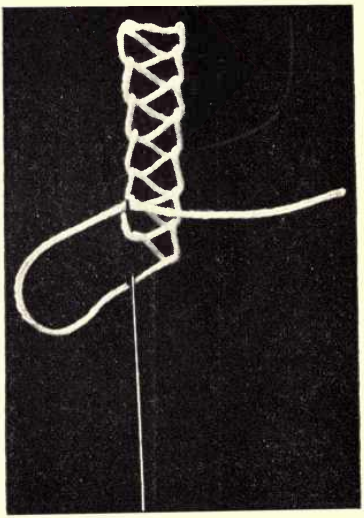




The **triple feather, briar** or **coral stitch,** is another form of feather stitch, with three stitches one below the other, worked on either side before crossing to opposite side. Make each stitch ⅛ inch deep, grouping closely. It may be worked vertic-

ally, slanting, or rounding, the latter way giving it the name, "coral."

With variations of these last three stitches, many designs may be worked in solid.



The **ladder** or **Creton stitch** is another method of working the buttonhole stitch. It has a firm edge on both sides, with a diagonal cross stitch between. Start at top of left double line, make a horizontal stitch the width of the space, coming

up in the first position again. Take a ¼ inch vertical stitch, with thread under needle, on the right line, putting needle at top end of previous stitch. This makes a diagonal stitch between the lines. Cross to opposite side, take ¼ inch vertical stitch on this line, with thread under needle, making a reverse diagonal stitch between space. Proceed with each stitch in the same manner, crossing from one side to other, ending at base of line with a horizontal stitch like the first one. The back of this stitch shows two parallel lines of short stitches like the whole back stitch on the right side.

The lower half of sampler has six designs showing different methods of filling-in stitches. In the upper half of this space, draw three petal-shaped leaves, with depression in center top like heart, in a 1¼-inch square.

Cut from paper first, and outline on material, one in center of space and one on either side, at equal distance. Draw direction of stitches before commencing to embroider.

Flowers with stamens, etc., have their lines radiating from the center, unless worked in satin stitch, while leaves radiate from center base.

Note—If one false stitch is taken when em-

broidering, take out before going further. Patching over wrong stitches shows, while cutting thread and joining, weakens it. Do not pull silk threads, but cut, as pulling roughens the fiber, and stretches the design out of shape.

The first petal is worked in **long and short** or **Kensington stitch,** and has as its name implies, one long and one short over stitch, the same on both sides, varying in length to give the desired effect in size and shape, by direction of stitch.

Take a few running stitches the direction of the first embroidery stitch, coming up on right side, on point at center base. Stick needle to

left, 3/8 inch up on line, and bring up from the wrong side 1/16 inch above center base to left.

Alternate length of stitches, being careful to follow outline exactly, working from left side to right.

The stitch at the depression in top of leaf, should be vertical with point at center base.

The **second petal** is worked in the **satin** or **French embroidery** stitch, which is a flat, even, over stitch, covering a whole or part of a design, in sections when too large, and leaving no material visible between stitches. It has variations, can be flat or padded, worked vertically, horizontally or slanting, with both sides alike. There is a method of making a short stitch on wrong side to save silk or thread, but it is unsatisfactory compared with the first way of working.

The satin stitches in second figure, slant from either side of center converging slightly toward base.

Draw direction of stitches before working.

Start at center point, with slanting stitch 1/4 inch long, following out line at left. Come up for second stitch at base, just above first stitch. Increase length and slant of each stitch to fill space, working from right to left. The

division of stitches comes thru center, leaving no material visible.

The **third petal** is worked in **solid long and short** or **Kensington,** with the satin stitch on the turned-over part of petal.

Take same paper pattern, and draw direction of stitches, then fold over top on left side. Notice direction of stitches on this part. To work this, start at center base, from left side to right as in petal 1, following outline, below turned-over edge. The second time around, fill in with the same kind of stitches, lapping the first ones slightly, so no join or space is visible.

The turned-over edge is worked with the satin stitch, the direction of the lines drawn, making stitches parallel.

The solid long and short stitches are the most satisfactory for color-embroidery work, where shading, tinting, etc., are necessary.

A split stitch may also be used, it being worked in the same manner as the long and short, putting the needle thru the center of a thread when lapping.

In remaining space of sampler make three designs for all over stitches. Draw a 1-inch diameter circle with 4 diagonals in center, and two

rectangles 1x1½ inches, the longer sides parallel with the buttonhole edge, on either side of circle.

The rectangle at left is filled with the darning stitches in upper half, and the seeding stitches in lower half.

Both are simple and quick methods of filling large surfaces, when solid work is not desired.

The **darning stitch** is a small even running stitch, worked on parallel lines with alternate effect in spacing.

Commence at right, making 5 rows as in sampler.

Seeding is made up of parallel lines of the half or quarter back stitches, with alternate effect in spacing, as the darning stitch. Make 5 rows.

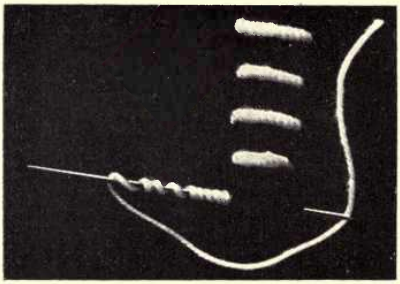
The **second rectangle** is worked in the honey-comb stitch.

The **honey-comb stitch** is a kind of buttonhole stitch, similar to the ladder stitch, being worked horizontally instead of vertically.

Start at left side, with a ¼ inch vertical stitch keeping thread under needle, as illustrated. Space between stitches should be about ¼ inch apart also. At end of first line, bring needle thru from wrong side, near last stitch, to keep in shape, and come up ¼ inch for second line, with thread

always under needle. Take the stitches in the second row in the center of the above stitch, drawing the thread down slightly to make a sextagonal design. Fill the rectangle in this way.

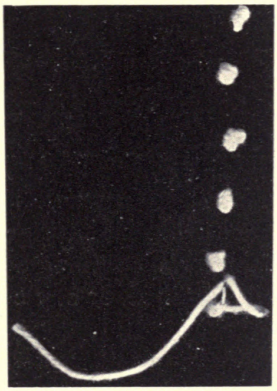
The **diagonals** of the **circle** in center design are worked in bullion with French knots at end of each.



The **bullion stitch** is a knot stitch, made by winding the end of the thread around the needle before drawing thru, as many times as is necessary to cover the line drawn. Start at end of one of the diagonals on edge of circle, coming up on right side. Stick needle 1-16 inch from center of circle, bringing up in same hole as first stitch, on edge of circle. Before pulling thru, wind thread that comes from eye of needle, 12 times

around needle, holding remaining end of thread down firmly, with thumb of left hand, until the needle is returned to center of circle, in the same hole. Drawing thread tightly, gives the stitch an effect of a firmly twisted cord.

Make second stitch in the same way, on next



diagonal at right, and so on, till all the lines are covered.

This method of work is very effective in small flowers, such as wheat, star-shaped flowers, etc.

The **French knots,** which are at the end of each diagonal, are worked by bringing needle to right side of material, on spot to be covered,

winding thread 2 or 3 times around needle (the more it is twisted, the larger the knot), and putting needle back into same hole, drawing it out on the next spot to be worked. Hold remaining thread down firmly till pulled thru, as in the bullion stitch.

French knots are used for centers of flowers, and filling in small spaces.

Press sampler on wrong side, and attach date finished.

CENTER PIECE IN ALL WHITE WORK

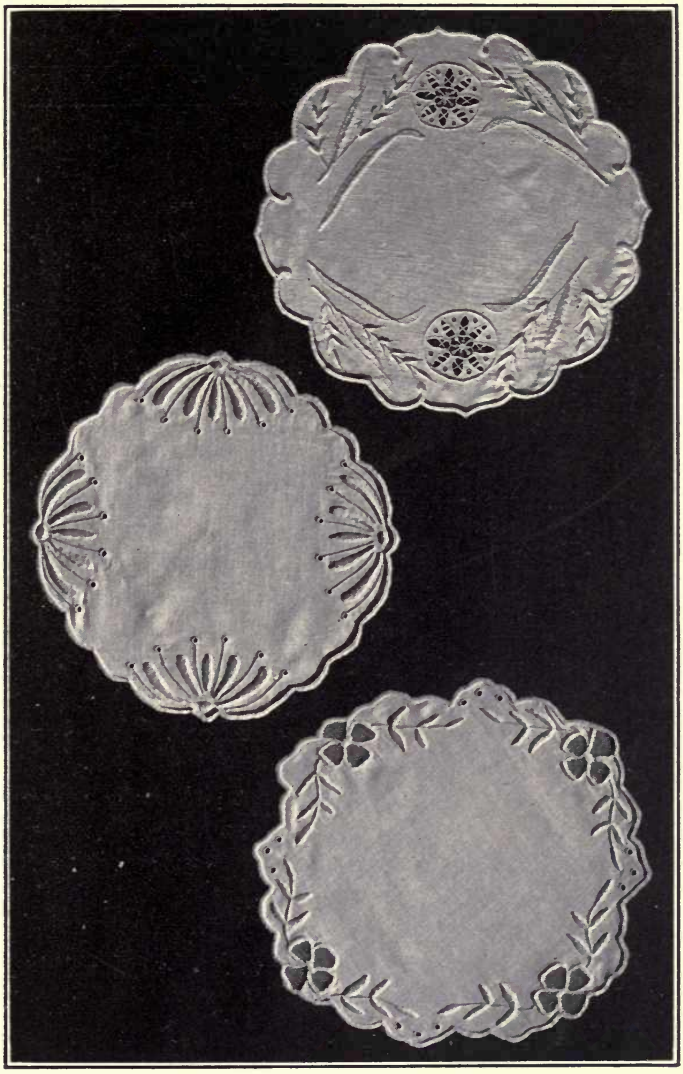
Material:

One-third yard white linen, cut oval or round, 12 inches in diameter, containing design for satin, eyelet, cut work appliqué, or any combinations of these.

The edges of sampler are finished with the buttonhole stitch, designed in scollops.

Work buttonhole edge first, as explained in the embroidery stitch sampler. Use cotton, which is bought in the skein, as heavy as the linen will permit for the outside edge. Numbers 10 to 18, with the embroidery needle to suit.

If design is original, the drawing may be carried out to suit certain stitches, but if a boughten



design, choose carefully the most effective stitch or stitches for each pattern.

The satin, eyelet, outline and French knots have been explained, and the Italian cut work and appliqué explained beyond, will give a sufficient range for working out the average center piece.

Cut work is a combination of edge and filling in stitches; the material on which it is worked, being cut out, after the design is worked. The filling stitches may be done on the surface of the material, or, the material worked in with them, both giving a wide range of work particularly when combined with the lace stitches.

Hardanger, Hedebo, and Italian are methods of cut work.

Drawn work could also be included under cut work, it being necessary to leave either the warp or woof threads as a foundation for working the stitches.

Appliqué is something like patchwork, a design being drawn first, and goods of another material basted on wrong side to cover outline, and worked with an over and over or buttonhole stitch around the edge of the design. The foundation material is then cut away carefully, leaving

the applied fabric. Appliqué in lace is very effective. See illustration.

Methods of working embroidery pieces:

Line or boundary stitches, as well as buttonhole and eyelet, are best worked without a hoop to hold them; but cut work, appliqué, and solid work, shaded in colors with filo, silks, etc., make it necessary to use the embroidery hoop to keep the goods smooth and firm.

Embroidery hoops are made (round or oval), in all sizes within about 18 inches in diameter, and can be held in the hand, or made to fasten to a table. They consist of two rings or hoops, one smaller than the other, to fit inside of each other closely. The best make, have a piece of felt wound on the outer circle of the smaller size, to protect the material.

If sheer material is used, it should first be mounted on a firm cloth.

When material is delicate in color, and unwashable, fold over embroidered part, as soon as finished.

An old or slightly indented thimble is best suited when working with filos and silk threads, as the threads are easily roughened.

Do not pull or snap threads, always cut.

Embroidery should be ironed on the wrong side, over a thick pad, to allow the design to stand in relief.

To wash silk or colored embroidery, use a pure white soap like Ivory, with warm water, (never boiling), and do not let soak in the water. Dry between cloths, to prevent colors running, and iron as soon as possible.

COLORED EMBROIDERY PIECE OF FILO SILK

Material:

One-half yard silk or linen (of any color), cut square or rectangle to contain not less than 9 square inches of embroidery. These dimensions are given in correlation with the drawing department, where a pupil is obliged to make her own design. The equivalent should be figured, if a boughten design is to be worked.

The principle of this embroidery, is to learn to work with a fine needle and silk thread, and to blend shades and tints, illustrating flowers in their proper colors, or conventional designs that are pleasing and effective.

The amount of space to be covered, can be applied to any design suitable for filo, with an

allowance of background, to suit bags, table covers, dresses, etc.

For shade work, use long and short stitch, as explained on embroidery sampler.

Centers of flowers are worked in French knots.

Stems and outlines in the Crewel stitch.

To choose the proper silks, match or contrast them well with the background.

For school, shade cards will be gladly furnished by leading manufacturers or stores, and the silks are ordered by their shade number.

When only 3 or 4 shades of one color are used, do not make the degree of shade too great, as it prevents proper blending.

For flower designs, study or procure the live flower if possible, or if worked from painting, match colors to samples on shade card.

For strong effects, pad the design, before filling.

An edge is also well defined, if worked heavier, or with the double strands of filo.

LACE STITCHES

The variety of lace stitches is numberless, and may be applied to all kinds of braids, which are

formed to make designs to be worked out with cotton, flax or silk threads.

Almost all the embroidery stitches are included among the lace stitches, changing the name when applied to lace braids; as, catch or herring-bone stitch becomes the **Russian** or zigzag stitch, the loose buttonhole connected on the parallel lines, is the **net** stitch, etc.

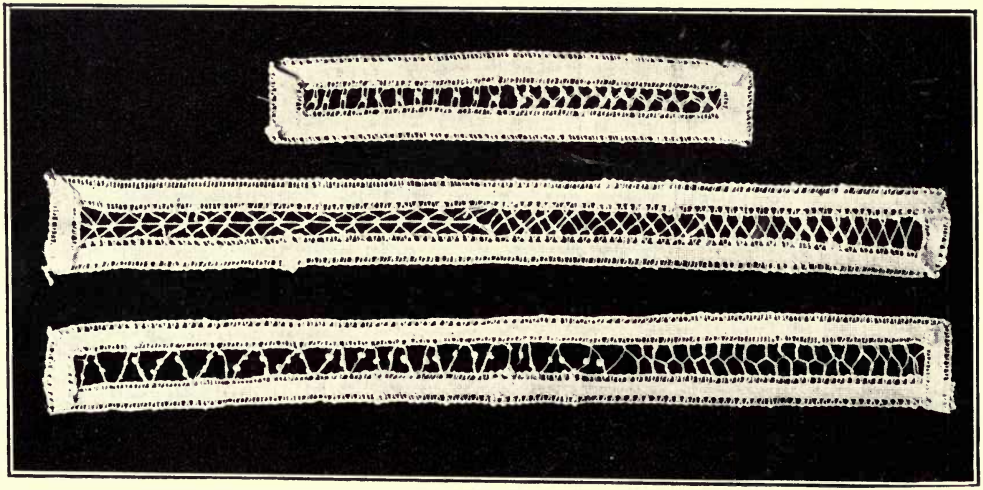
Authorities differ so on names given to the same design after it is worked, it is only necessary to give the method of working some of the simplest stitches, that will serve as guides to complete the lace piece.

Because lace work has no background other than the fancy stitches, it demands more accuracy in workmanship, and is thus harder to accomplish. Basting well the foundation braid is the first step, making neat joins, where the braids cross. Lap raw edges together on the inside. To have a sampler of stitches to choose from, so certain stitches may be seen to be best adapted to different shaped-spaces, is quite essential.

LACE SAMPLER

Material:

Two yards Battenburg braid ¼ inch wide.



Two skeins No. 25 flax or linen thread.

Baste braid to paper, cambric or holland, in parallel lines ¼ inch apart, or in squares or circles, as illustrated. Square and pointed corners are mitered.

Narrow braids may be basted thru the center, except on round edges which must follow the fullest side of the curve, the inner side being gathered into the space, with a very small overcast stitch.

Work lace stitches from left to right. Do not knot thread in starting.

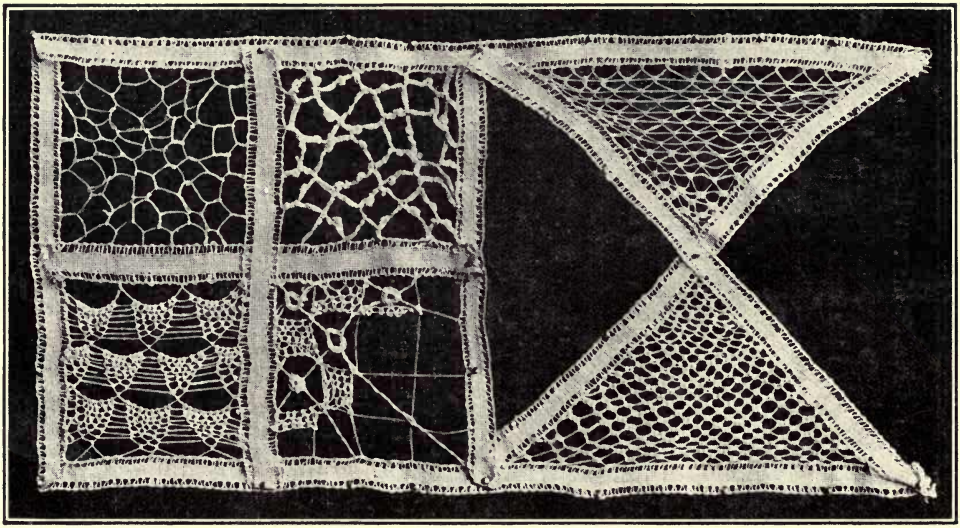
From the simple herring-bone stitch, work up to the more complexed, as illustrated. The first stitches are worked singly, the second have the same stitch worked between, making the diagonals cross in the center.

The third has a thread worked thru the center, where the diagonals cross, held firm by a knot or single buttonhole stitch.

On the next illustrated strip, the plain herring-bone is started, then two twists around each stitch is made, giving an entirely different effect.

The following stitch is the plain herring-bone with picots worked irregularly on each diagonal.

Picots may be made like the bullion stitch, or



on buttonholed bars, or combination of both. For buttonholing bars for picots, start at left.

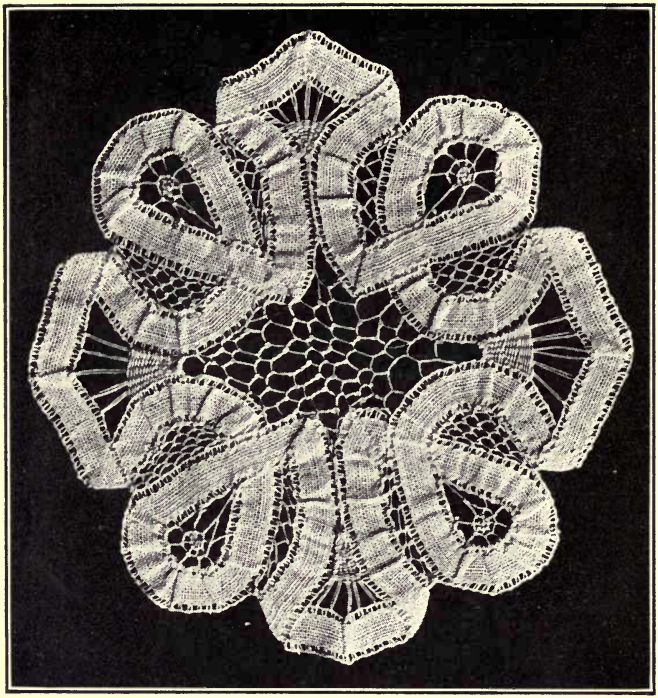
A **filling-in** stitch is worked in a loose buttonhole, like the first design in square, making as an irregular effect as possible. This same lace work may be buttonholed with picots worked irregularly and occasionally, adding more strength to the work.

One of the simplest and most effective of all lace stitches, is the net stitch and its varieties. The single net is called by some "Brussels point," and most of the net stitches have different names.

The single **net** stitch is an embroidery buttonhole stitch, started at left end, and worked on even, horizontal lines, leaving a loose thread, which is caught in the center by the next line of stitches. These stitches may be worked in groups or graduated in design, like the pointed one in illustration. This last one has been named the tent and the pineapple stitch.

All kinds of combinations may be invented, which makes the lace stitches so interesting.

Round designs are filled in with **wheels** and **spiders' webs,** made on a foundation of single or double bars or diagonals. Connect the diagonals with an overcast stitch on edge of braid, spacing,



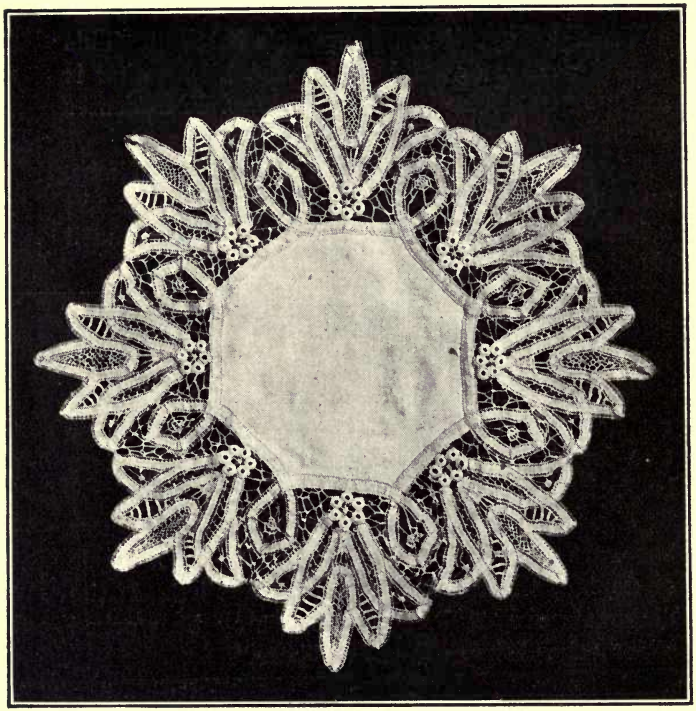
according to size of open space. Fasten in center with buttonhole knot, and weave in and out as the darning stitch, filling circle half full. This is one method of making the **wheel.** Another is made by buttonholing a complete circle in center of space, being held in place, by diagonals.

The **spider's web** is started in center with knot, and the thread carried to the next diagonal, and a buttonhole knot made. This is repeated until the design resembles a web.

To work a **center** of **raised stitches**, which is stronger and more effective than the wheel or web, make an uneven number of diagonals.

Start in center as before, go under two diagonals for the first stitch, back one and under two for the second stitch, and so on. This is a backstitch.

Curved spaces, coming to point at center base, are worked with radiating diagonals, single or double, and the darning stitch applied. If the diagonals are double, each one may be worked separately. They are called **"bars."**



DESIGNED LACE PIECE.

Draw or buy design for battenburg, for center piece, collar, fan or any pattern desired, to contain 12 square inches of embroidery.

From the sampler stitches and others explained, make lace piece.

If made for a linen center, trace inner edge of battenburg braid, with the linen laid smoothly on underside, the length of design on straight of goods. Cut baste threads on braid, and remove carefully. Mount center on linen, hemming on either side of braid, with the raw edges turned in. Press on wrong side. Attach name and date.

QUESTIONS

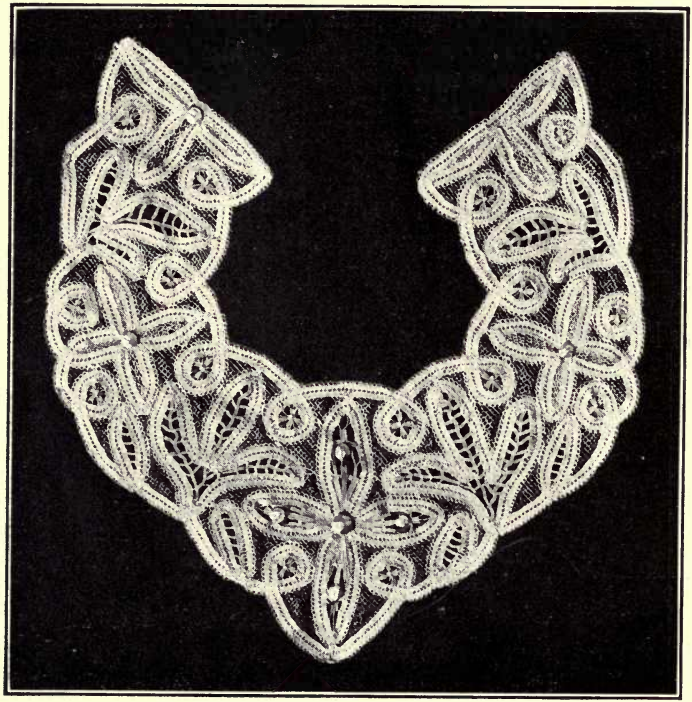
1. What is hemstitching, and when used?

2. What is embroidery, and when do we first hear of it?

3. What are the differences between plain, embroidery and lace stitches?

4. How are embroidery stitches started, and which direction worked?

5. What are the outline stitches? The ornamental?



6. What are the filling and solid stitches called, and how used?

7. How does the embroidery buttonhole differ from the tailor's?

8. What are the knot stitches, and how applied?

9. What is eyelet embroidery?

10. What is couching?

11. How is the satin stitch worked? Illustrate direction of stitches on a flower with 4 petals,—one of them bent over, showing turned-over part.

12. What is cut work?

13. What is drawn work?

14. What is appliqué?

15. When are embroidery hoops used?

16. What is filo silk and how used?

17. How is white embroidery washed and ironed? Colored?

18. What are the lace stitches, and how related to the embroidery ones?

19. How is battenburg basted? Illustrate in a pointed and round design.

20. What is the net stitch? Illustrate method of work.

21. What kind of thread is used for battenburg braid?

22. How are wheels made, and in what shaped spaces?

23. How do spiders' webs differ from wheels and when used?

25. Make an illustration with 10 different lace stitches for various shaped spaces.

24. What are picots?

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